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# TRANSACTIONS

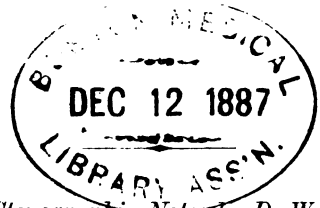
OF THE

# NEW JERSEY

# State Dental Society

FOR THE YEARS

## 1881-2-3.




*From Stenographic Notes by D. W. Craig.*

NEWARK, N. J.
DAILY ADVERTISER PRINTING HOUSE.
1884.

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# TRANSACTIONS

OF THE

# NEW JERSEY

# State Dental Society

FOR THE YEARS

## 1881-2-3.

*From Stenographic Notes by D. W. Craig.*

NEWARK, N. J.
DAILY ADVERTISER PRINTING HOUSE.
1884.

CATALOGUED
AUG10 1903
J. F. D.

# EDITOR'S PREFACE.

The task of editing and revising the Minutes of 1881, 1882 and 1883 of the Transactions of the New Jersey State Dental Society having, through resolution, devolved upon the Secretary, in the following pages he presents the result of his labors. As the Proceedings are primarily supposed to be for the members' benefit, with that idea in view I have retained such portions of the discussions as may prove of future value for reference. Members of the profession outside, into whose hands this volume may fall, will, for the above reason, excuse uninteresting portions of the work, affecting purely the interests of the Society.

Words spoken during the heat of discussions I have occasionally omitted; other portions I have changed slightly in the line of grammatical construction.

To the members I offer my hearty thanks for the confidence reposed in me in deeming me competent to perform this work.

Due credit will be awarded to Drs. F. A. Levy, James G. Palmer and G. Carleton Brown for their efforts in materially reducing the cost entailed in producing this work, through the advertisements obtained.

CHARLES A. MEEKER.

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Board of Examiners.

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C. W. MELONEY, J. HAYHURST,
JAS. G. PALMER, F. C. BARLOW,
FREDERICK A. LEVY.

State Prosecutor.
CHAS. A. MEEKER.

# PROCEEDINGS

OF THE

# NEW JERSEY STATE DENTAL SOCIETY.

## ELEVENTH ANNUAL SESSION.

---

LONG BRANCH, July 20, 1881.

The Association convened at the Ocean Hotel on Wednesday morning, July 20, President J. C. Clarke in the chair, and the proceedings were opened with prayer by Dr. Cosad, in these words:

ALMIGHTY GOD, our Heavenly Father, we desire to recognize thee in all things, and we desire thy presence with us in our meetings, that thy Spirit may give us wisdom and direct us, so that in all things we may seek the elevation of our profession, individually and socially, that the object that has brought us together may be sanctified to the advantage of all, and increased knowledge and usefulness be the product of these deliberations. Grant us, we pray thee, a spirit of brotherly love and charity and kindness, that we may dwell together in amity, having always in view, as our object, the advancement of our profession individually, socially and morally. Give wisdom to the presiding officer, and suggest to our minds and hearts those things that shall be for our encouragement, instruction and improvement. Guide us in all the deliberations of this meeting, and with thy Spirit through life; may we so live and act that when life's work is done, we may be brought to live in a better world, where separation shall be no more. We ask this in the name of Him who has taught us to say: Our Father who art in heaven, hallowed be thy name, thy kingdom come, thy will be done on earth as it is in heaven; give us this day our daily bread, and forgive us our trespasses as we forgive those who trespass against us; and lead us not into temptation, but deliver us from evil. For thine is the kingdom and the power and the glory, for ever and ever. *Amen.*

The reading of the Minutes of the last session was dispensed with, they having been printed in book form and copies furnished to members.

Applications for membership were received as follows: Coleman Gray, of Jersey City—sponsors, F. C. Barlow and James C. Clarke; Howard Roberts, of Morristown—sponsors, C. W. Meloney and G. C. Brown; E. H. Bunting, Jr., of Newark—sponsors, C. A. Meeker and James C. Clarke; Chas. Van Antwerp, of Jersey City—sponsors, F. C. Barlow and D. C. McNaughton; R. M. Sanger, of East Orange —sponsors, F. A. Levy and J. C. Hanks. The applications were referred to the Examining Board.

A recess of ten minutes was taken, after which the Convention was called to order, and Dr. Hayhurst, of the Examining Board, reported that the Board had examined, and recommended for membership, the following named gentlemen: Howard E. Roberts, R. M. Sanger, Coleman Gray, E. H. Bunting, Jr., and Charles Van Antwerp.

On motion, the Convention proceeded to vote upon the question of admitting the applicants who were present to membership, and the following named gentlemen were duly elected: Howard E. Roberts, E. H. Bunting, Jr., Charles Van Antwerp.

On motion, a committee of two, consisting of Dr. Levy and Dr. Barlow, was appointed to wait upon the newly-elected members and notify them of their election. The committee presented Dr. Roberts, Dr. Van Antwerp, and Dr. Bunting, who were introduced.

DR. J. C. HANKS, of the Publishing Committee, stated that the committee had a report to make, and would be ready to report at the evening session. On motion, the report of the Publication Committee was laid on the table until evening.

DR. HAYHURST, of the Examining Board, reported as follows: We met in Jersey City on the 7th of January. Only one made an appearance, and that was Arlington E. Sheets, who was examined and passed. Yesterday, being the regular annual meeting day of the committee, we met here in accordance with instructions, and had two applicants. We examined them, and they both failed. I believe it is not necessary to read the names of the failures. They both appeared to be honest, capable men, so far as their manhood and moral character are concerned, and they will probably present themselves again for examination.

On motion, the report was accepted.

DR. BARLOW stated that the Committee on the Code of Ethics were not quite ready to report, and would report later.

DR. J. C. HANKS stated that the Executive Committee would report later in the session.

PRESIDENT CLARKE—We will now proceed to Rule 7, the election of officers.

DR. LEVY—I think it would be just as well to postpone the election of officers until a little later, when we have more members present. Last year there was some trouble about the election of officers taking place so early in the day. It is in the regular order of business now, but still, as there is some objection to it, I would move to lay it over until this evening.

DR. MCNAUGHTON—I would move to lay it over until to-morrow morning.

PRESIDENT CLARKE—The order of business calls for the election of officers at this time. It is printed and distributed to members, and if they do not come here in time, that is their fault. You will have this same trouble every year. I don't think it is proper to suspend the order of business to accommodate those who come here intending to stay only one day, for the purpose of taking part in this election of officers. They can come here in time as well as we who do take the trouble to.

DR. E. F. HANKS—We had a good deal of wrangling about the time of the election of officers, and we finally settled the question as to when it should be; it was fully understood, and I don't think we should interfere with the order of business now.

The question of postponing the election of officers was put and lost.

PRESIDENT CLARKE—We will now proceed to the nomination of a candidate for President.

DR. OSMUN nominated Dr. F. C. Barlow for President.

On motion, the Secretary was directed to cast the ballot of the Society for Dr. Barlow.

DR. WATKINS—I have nothing to say against the election of Dr. Barlow, but I think the casting of the ballot by the Secretary is a bad proceeding. The election should take place by ballot; I think that is the proper and most satisfactory way all around, for then everybody can have his say.

PRESIDENT CLARKE—I do not think there is anything in the Constitution that requires separate balloting.

DR. E. F. HANKS—It rests with the Society to say whether the Secretary shall cast the ballot or not. Those who do not want the Secretary to cast the ballot can vote against it.

DR. WATKINS—Many would not want to vote against it, on account of making hard feelings. I have no objection to Dr. Barlow's election, but I think the casting of the ballot by the Secretary, in any election, is a bad proceeding.

PRESIDENT CLARKE—The Secretary has cast the ballot, as authorized, for Dr. Frederick C. Barlow for President of this Society for the ensuing year, and I hereby declare him elected.

DR. LEVY—If I understand the By-Laws, if there is a dissenting voice against the Secretary casting the ballot, then we have to suspend the rules.

PRESIDENT CLARKE—There is no such rule at all; it is only a resolution of the Society that the Secretary cast the ballot. The By-Laws require the election to be by ballot, and this election was by ballot; dissenting votes against it would nullify it.

DR. WATKINS—There was no dissent in this case.

DR. OSMUN nominated Dr. J. C. Hanks for Vice-President.

DR. LEVY moved that the rules be suspended and that the Secretary cast the ballot. The motion was carried without dissent. The Secretary cast the ballot, and Dr. Hanks was declared elected Vice-President.

DR. BROWN nominated Dr. Charles A. Meeker for Secretary.

On motion of DR. LEVY, the rules were suspended, and the Treasurer was authorized to cast the ballot for Dr. Meeker, who was declared duly elected to the office of Secretary.

DR. LEVY nominated for Treasurer, Dr. G. C. Brown, Sr.

On motion of Dr. OSMUN, the rules were suspended, and the Secretary was authorized to cast the ballot for Dr. Brown, who was declared duly elected.

The following nominations were made for Board of Examiners: Drs. J. C. Clarke, F. A. Levy, C. W. Meloney, J. Hayhurst, E. F. Hanks, J. W. Cosad.

The Convention proceeded to ballot, with the following result: Drs. Clarke, Levy, Hanks, Hayhurst, and Meloney were declared elected.

Nominations to the Executive Committee were made, and after a ballot, the following named gentlemen were declared elected an Executive Committee: Drs. J. A. Osmun, E. H. Bunting, G. Carleton Brown, W. Price Richards, J. C. Hanks.

Drs. McNaughton, Watkins, Baldwin, Roberts and Bunting, Jr., were nominated to the Registration Committee.

On motion of DR. LEVY, the election of the Registration Committee was laid over until the evening session.

On motion, the Secretary was empowered to appoint as delegates to the different Societies, those applying for certificates.

On motion, No. 8 of the Order of Business, the selection of the place of the next annual meeting, was passed.

On motion, No. 9 was passed, and No. 4 of the Order of Business opened.

Dr. F. B. Welch, of Vineland, was nominated for membership—sponsors, T. B. Welch and G. Carleton Brown. Referred to committee.

On motion, No. 4 of the Order of Business was closed, and No. 10 opened.

DR. D. C. MCNAUGHTON—Last year the amendment to the Code of Dental Ethics was laid on the table, in response to a request of Dr. Stockton, who wished to read an essay. I consented to its being laid over, on the understanding that he would bring it up the following day, as I would not be present. He failed to do so. I now move that it be taken from the table, and that it be referred to the Committee on Dental Ethics.

It was so ordered, and Dr. McNaughton offered the following resolution:

*Resolved*, That Dr. T. B. Welch be directed to pay to the chairman of the Committee on Registration twenty-five dollars, for the use of the lists of dentists in the hands of the committee, as per agreement.

DR. WELCH—As to that being according to agreement, I will say that Dr. McNaughton allowed me to take the lists of dentists in his possession with the understanding that I would return them

promptly, and pay him whatever the Society should deem proper. I have spent, perhaps, one hundred and fifty dollars in obtaining the most perfect lists of dentists that could be had, and as an assistance, I have obtained the use of these lists of Dr. McNaughton. I told him that I would leave it to the gentlemen of the Society to say what the compensation should be. He did not like to fix the amount, and I did not, and so we left it to the Society. I think that Dr. McNaughton rather oversteps the question in placing the amount. I hope the Society will be magnanimous. I have a number of lists which would be of great value to the Society, and which they can have the use of. If you place that amount at ten dollars it will be fully as high as it should be. There were only a few lists that I could use; they were not what I expected; and if you place that sum at ten dollars it would be fully as much as it should be; yet I am subject to the judgment of the Society.

DR. MCNAUGHTON—In making the exchanges of lists, a large number of these lists were sent simply written out, and quite a number of persons applied to me for copies. It was a very difficult thing to furnish, and the only thing I could do was to have them copied, and in doing so I expended about fifty dollars. Those copies comprised all the other States, with the exception of ours, taken in the State of New Jersey. It is very valuable; to any manufacturer starting in business it would be worth one hundred and fifty dollars. It is a list of dentists in about twenty States. It is the result of the work of the Registration Committee; even this New Jersey list is the result of that work. I have spent about fifty dollars in getting up these copies, aside from having the New Jersey list printed, and I have received about fifteen dollars and seventy-two cents from the sale of the New Jersey list.

DR. WELCH—I will simply say that, as a member of that committee, the Registration Committee, I had a right to the lists anyway, but I waive all that. The idea of the lists being worth one hundred and fifty dollars to me! I had already spent that in getting lists from just the same source of our friend, and I had the best lists in several of the States; some of his were better than mine; I believe that only two of his were better than mine, while I had six or eight that were better than his.

On motion of Dr. LEVY, the question was referred to the Executive Committee, with power to fix the price.

DR. MCNAUGHTON offered the following resolution, which was passed:

*Resolved,* That the price of the Dental Directory of this State be reduced to one cent per name; and further, that the action of the committee in disposing of the list at the same price be endorsed.

DR. MCNAUGHTON offered the following resolution, which, on motion of Dr. Levy, was laid on the table:

*Resolved,* That the Examining Board be directed to present to this Society the examination papers used at the last examination of candidates, together with the markings.

DR. LEVY moved that a committee of two be appointed to revise the order of business.

DR. MCNAUGHTON moved to amend that the committee be directed to revise the By-Laws.

DR. LEVY declined to accept the amendment, saying that a revision of the By-Laws would require too much time and another committee should be appointed for that work.

On motion of Dr. E. F. HANKS, the resolution was laid on the table.

DR. LEVY called for a division on the question, but was ruled out of order, as the vote had been announced.

On motion the Convention adjourned to 7:30 o'clock, same date.

## EVENING SESSION.

The Convention was called to order by the President at 8 o'clock and the Secretary called the roll.

The Secretary, Dr. Meeker, presented a report of the Executive Committee upon the resolution of Dr. McNaughton, referred to that committee, to the effect that the sum of twenty-five dollars be paid, according to the terms of the resolution. The resolution was read.

DR. WELCH—I object to the wording of that resolution. It reads "as per agreement." Now, the distinct agreement was not that I should pay twenty-five dollars, and was not that I should pay anything; the agreement was that I should have the use of the lists and leave it to the Society to say what it was worth. Now, instead of that, he brings in a resolution making twenty-five dollars the price, and says "as per agreement." I want it distinctly understood. That is all I have to say. There was no such agreement.

DR. E. F. HANKS—Dr. Welch has agreed to pay what the Society thought right. I do not think Dr. McNaughton means to say that you agreed to pay twenty-five dollars, but that you agreed to pay whatever the Society should deem to be a proper amount, and that twenty-five dollars was a proper amount to be paid. I suppose Dr. McNaughton thought that, as Chairman of the committee, he was the proper party to fix it.

DR. BARLOW—As I understand it, and according to Dr. Hanks' explanation, Dr. Welch was to pay whatever the Society should think right and proper. Dr. McNaughton offers this resolution fixing the amount at twenty-five dollars, thinking that that was a fair compensation for value received, and the Executive Committee have acted upon and approved Dr. McNaughton's resolution. These are the facts, and the question is, has the price been overestimated or not. If the sense of the meeting, as well as that of the committee, is that twenty-five dollars is a fair price, I suppose Dr. Welch would have to abide by the agreement.

DR. MERRITT—I should think Dr. McNaughton is the proper man to know what this is worth.

DR. E. H. BUNTING, SR.—The resolution was referred to the Executive Committee, with power. The Executive Committee have

settled the price, and it only remains now to accept the decision of the Executive Committee. I move that the decision of the Executive Committee be accepted.

DR. BUNTING'S motion was carried.

DR. G. CARLETON BROWN offered the following:

*Resolved*, That for a more perfect system in conducting the presentation of essays and papers, we do form two sections, to report at each meeting and present such papers as may be deemed worthy of consideration, the sections to be as follows: Section 1. Operative dentistry, artificial dentistry, chemistry, metallurgy and dental education. Section 2. Anatomy, physiology, pathology, therapeutics and materia medica. Sections to be conducted under the rules of the American Dental Association.

DR. E. F. HANKS—I don't understand what Dr. Brown's idea is in having these sections. The object of these sections is to facilitate business where societies are so large that they are unwieldy and where it is inconvenient for them to see each other, and to manage their affairs in one room. Our Society is certainly not large enough to divide up into sections; at least it does not strike me so.

DR. BROWN—I think that by dividing into two sections in this way, it would bring matters so that they could be worked up and be presented in better form, than now. In the American Dental Association they have now seven sections; I only propose two. The idea is to have all the papers that are to be presented before the Society, brought before the sections; they will be heard by the sections, and if they are considered worthy to be brought before the Society, the sections will so recommend. At the same time there will be a report from each section, on the progress of the different departments under its charge. I think it would awaken more of an interest in the writing of papers, than there is under the present system.

DR. E. F. HANKS—I think the Society is not yet large enough for anything of that kind. As to bringing the papers before the Society, if you will consult the Secretary, you will find that he has difficulty in getting enough papers now before the Society, and if you get them before the sections and have them criticised, and some of them thrown out, you will have less.

DR. LEVY—If I understand the manner in which sections are managed, the sections would be compelled to bring before the Society some papers to be discussed, and which would have to be papers regarding dentistry. Last year we had some little discussion about the papers not being upon dental subjects. This would force us to the discussion of papers upon dental subjects and nothing else.

DR. OSMUN—I think Dr. Hanks has the correct idea regarding the proposed division into sections. He says we have difficulty in getting sufficient papers now, and if we divide into sections, the papers have to be read twice, and criticised by whoever is chairman of the section they come before; and I think that if a paper is written, it had better be read before the Society.

DR. BROWN—Dr. Osmun evidently does not understand the working of sections. The papers are merely brought before the sections, and if approved by them, they are then brought before the Society; they need not all be read before the sections. The reason I made this motion was on account of not having enough papers this year to fill up the programme, and I thought this would probably bring out more papers than would be obtained by throwing the whole thing on the Secretary's shoulders.

SECRETARY MEEKER—I have probably sent out fifty or seventy-five letters and postal cards to different members, writing twice or three times to some, trying to induce them to write papers; and it is very difficult to do this, month after month, until just before you have to make up the programme, and then, not know what you are going to place on it. I like to see a good programme, and I am in favor of this thing, to see how it will work. If it does not work satisfactorily, we can abolish it.

DR. MERRITT—Do I understand that each section shall bring the papers anyhow?

DR. BROWN—Certainly.

DR. LEVY—It has been suggested that this arrangement would bring forward more papers, because there would be a great many who would write short papers, who would not write long ones. Then they are to be sent in to the sections for examination, and the chairman of the section will embody in one report what is to be brought before the Society. That is the way it works in the American Association.

DR. HAYHURST—I have refrained from taking up any time in this discussion, because I think, there is a great deal too much time spent in this routine business; and I would like to see some method adopted by which we can dispose of this kind of business without taking up a whole day before we can get to the legitimate business before us. I would like to see this matter either thrown upon the Executive Committe, or laid upon the table altogether. I can very easily see why in large associations, filled with our most talented members, who are loaded up ready to burst unless they can get their say—I can see why in such associations they should systematize and separate into different portions the business to be done; but we have a limited number of members, and, as far as my information goes, they are not very free in writing papers, and the Secretary has usually great difficulty to get papers enough, and why should we adopt a system of this kind, though it may be very suitable and necessary for large bodies? Why not let it go on as it is, or refer the matter to the committee? I am willing to do either, so as to get this matter out of the way, and not have it take up any more time. I move that we lay it on the table.

The motion was carried, and the resolution laid on the table.

DR. HAYHURST—I do not mean that this shall kill the resolution at all, but that it shall be brought up in such manner as not to make a disturbance and interfere with the regular business.

DR. BARLOW—I have a complaint which I would like to enter before this Society, as follows:

NEWARK, August 17th, 1880.

*To the Members of the New Jersey State Dental Society:*

GENTLEMEN—The subscribers hereby make a complaint against Dr. J. F. Deacon, of Mount Holly, for unprofessional conduct, detrimental to the good character of the Society; inasmuch that, during the sessions of this Society, at Long Branch, in the year 1879, he left the hotel at the close of the sessions, without paying his bill, and that the Messrs. Leland made complaint to the subscribers that one year had elapsed, and no notice was taken or payment made by said Deacon.

F. C. BARLOW,
CHARLES A. MEEKER.

DR. BARLOW—I move that Dr. Deacon be expelled from this Society.

DR. MEEKER—I second the motion. I will read, if you please, the following correspondence in relation to the matter.

LONG BRANCH, July 24th, 1880.

*Dr. G. C. Brown:*

DEAR DOCTOR—The inclosed bill was not paid last year. Can you aid me in collecting the same? If you can, you will greatly oblige,

Yours truly,
WARREN LELAND, JR.

August 20th.

*Dr. Brown:*

In my hurry to get ready I neglected to show the check to you. I have secured my place here, which is the best I ever saw. I shall write Leland and ask for his explanation myself. Will be at home in a few weeks, as my contract does not go into effect until October 20. If it has done you any good to circulate the report that I didn't pay my board at Long Branch, I am glad to hear it. I considered you more of a friend than that, if it were even true. I have heard it three times, and all said it has come from you.

J. F. DEACON.

LONG BRANCH, Sept. 1st, 1880.

*Dr. Geo. C. Brown:*

DEAR SIR—Please accept thanks for check for $6.00, in settlement of Dr. Deacon's account. If he sent check, we never received it; nor ever replied to a number of bills sent to him. With many thanks we are

Very truly,
C. & W. LELAND, JR.

DR. BROWN—I would say, in connection with that, that after I received the first communication from the Messrs. Leland, I took the first opportunity that presented itself to call upon Dr. Deacon, and to show him the letter and ask him for an explanation. He seemed somewhat surprised, and said he had paid it. I said, "If you paid it, how did you pay it?" He says, "I paid it by check."

I said, "Then it is the easiest thing in the world to prove that you have paid it; just give me the check, and I will write Mr. Leland that he has made a mistake, and the whole matter will be fixed." He promised to do so; he promised on two or three occasions to bring the check to me, but he neglected to do it. Finally he said he would leave it at a store we were in the habit of frequenting, but he never left it there. This is a letter he wrote me after he had left Mount Holly, and gone to the western part of New York State, Canandaigua, I believe. I have had no further communication with the gentleman from that time to this. He seems to take umbrage at my saying he did not pay his bill. I did say so, and I stick to it. I have seen Mr. Leland, and he said the letter that the Secretary has read is correct, and that he never received any communication from Dr. Deacon whatever, nor any check.

DR. MEEKER—I will say that the subject was brought before the Executive Committee in January, and the Executive Committee ordered the Treasurer to pay the bill, and it has been paid.

The motion to expel Dr. Deacon from the Society was put and carried unanimously.

PRESIDENT CLARKE—The election of a Registration Committee was laid over until this evening. A motion to close Rule 10 and open under Rule 7 would be in order.

On motion it was so ordered.

Drs. J. G. Palmer, D. C. McNaughton, H. E. Roberts, S. C. G. Watkins, C. S. W. Baldwin, and G. W. Merritt were nominated.

On motion, the rule requiring candidates to be present when voted for, was suspended, Dr. McNaughton not being present.

DR. BALDWIN—Dr. McNaughton is absent, and as everybody wants him on that committee, why not leave this election until the next session? I make a motion to that effect.

PRESIDENT CLARKE—The rules are suspended in Dr. McNaughton's interest.

DR. BALDWIN—They could not suspend them this morning.

PRESIDENT CLARKE—Yes they could, but they did not wish to.

On motion, the Secretary was authorized to cast the ballot for the candidates named; and they were declared duly elected a Registration Committee for the ensuing year.

On motion, No. 7 in the order of business was closed, and No. 4 was opened. The following nominations for membership were made: Dr. J. H. Slocum, of Long Branch, proposed by Drs. Palmer and Meeker; Dr. M. C. Slocum, of Asbury Park, proposed by Drs. Palmer and Meeker.

On motion, the Secretary was authorized to cast the ballot in favor of Dr. F. B. Welch, of Vineland, who was thereupon duly elected to membership in the Society.

DR. MEEKER—Inasmuch as Dr. Welch has paid into the Board of Examiners the amount of thirty dollars for his certificate to practice, I move that the amount due for the certificate of membership, five dollars, be remitted and the certificate presented to him. I do this as in one case, of four years ago.

DR. LEVY—I know of other cases where persons have joined the

Society under the same circumstances, and the fee was not remitted. Why should it be done in this case and not in others?

PRESIDENT CLARKE—I could not tell you.

DR. LEVY—Here is Dr. Richards, who passed the Board of Examiners, and paid for his certificate in the same way.

DR. OSMUN—I also passed before the Board, and I paid the five dollars when I became a member. I don't see why there should be any remittance of the five dollars in this case. As long as it is the rule I think it should be carried out.

DR. T. B. WELCH—I have only to say in this matter, that I brought this young gentlemen before the Society for admission under its provisions; and I think that if I had rememembered, at the time, of his appearance before the Examining Board what I do now, that probably that examination would not have been required and the thirty dollars would not have been required of him. I said at the time that the Doctor was not a practicing physician or dentist here at the time the law was passed; my remembrance was that he was not. Afterward I found that, although he did go from the State at the time specified, that is two years before the law was passed, he returned, and was a citizen here in this State and practicing, excepting that he was a portion of the time gone; he returned here, was married, and then left the State permanently. He was a dentist here in the State at the time the law was passed, but I did not think of it at the time of his examination. I don't know whether the Secretary had that in mind or not when he made the motion; but it was rather a grievance to my son that he should have had to pay thirty dollars under those circumstances.

DR. LEVY—I should say then that we ought to return the gentleman twenty-five dollars, taking only the five dollars for membership fees in the Society.

DR. OSMUN—I would like to ask Dr. Welch if his son, at that time, was in practice for himself, or in his office.

DR. WELCH—He was practicing by himself.

DR. MEEKER—With the permission of the Society I will withdraw that resolution.

DR. HAYHURST—May I make a suggestion? If there is not some correction, there may be a false conclusion in relation to this matter. The law says that persons who were in practice at the time of the passage of the law need not be examined, but it says nothing about persons who were in practice before that time. In this case, it was distinctly understood that this gentleman was in practice before the passage of the law, and that before the passage of the law he left and went into Pennsylvania, and did not return to the State of New Jersey until recently, and therefore he comes under the provisions of the law requiring his examination. I so stated it at the time, and I think it is a correct position.

DR. WELCH—I take the responsibility of the error, and my son does also. I stated at the time that he was not a resident of the State at the time the law was passed; but as a matter of fact he did return and remained here awhile; he was away, but he returned again, and he was not a resident in Pennsylvania until after the law

was passed. He did not become a resident dentist there until afterward; therefore he was a resident dentist here. I had forgotten that at the time, and he had forgotten it.

DR. HANKS—Do I understand that his residence was here and that he was practicing here?

DR. WELCH—Yes, he was practicing here.

DR. MEEKER—The Examining Board have reported favorably upon the applications of J. H. Slocum and M. C. Slocum.

On motion, the Secretary was authorized to cast the ballot in favor of the gentlemen named, and they were duly elected to membership.

On motion, No. 9 of the order of business was taken up, and the President, Dr. J. C. Clarke, read his annual address.

## PRESIDENT'S ADDRESS.

*Gentlemen of the New Jersey State Dental Society:*

We assemble again on the shore of the turbulent Atlantic to take part in the eleventh annual session of this Society. Whether it has been a year of prosperity to us, each can answer for himself. The last, or tenth annual session, was the largest convention since the organization of this Association, both in attendance and in general interest. Those who favored us with their presence were greatly pleased with what they heard in the general discussion. I hope and trust that this session will be as largely attended and the same interest manifested as the preceding one, so that when we return to our homes we can say with perfect satisfaction that we do not regret the time thus spent.

We meet again with full ranks, and we can congratulate ourselves that Father Time has passed us by and has not called any one of our Society "to that bourn from which no traveler returns." We can congratulate ourselves that the New Jersey State Dental Society is now looked upon as a permanent association; that the steady advance the Society has made, together with the law of 1873 and the amendment of 1880, has made it a power not to be despised; that it has had the effect upon those who contemplate practicing dentistry, to be more thorough in their studies, as they know that a mere three or four months' study will not do, as has been the practice heretofore, for the gentlemen who compose the Board of Examiners are the peers of any, and are thorough in their examinations. Our Society is continually increasing. We number nearly one hundred members. With but few exceptions, all who pass the examination immediately join, and one by one we are getting some of the older members of the profession, they seeing that the sessions of the Society are of some benefit to them.

I would likewise state that the Society has increased in the form of "better halves" of some of our members. That little archdemon, Cupid, has been at work since our last session, and he has succeeded in convincing two or three of our bachelor associates that

it would be more conducive to dentistry for them to take unto themselves a helpmate, and, like good members of society, have followed in the footsteps of those colleagues of us who were convinced before. "May they live long, prosper and be happy."

There is one case I must congratulate the Society upon being brought to a successful issue. It appears that for four years, annual and semi-annual, the Secretary has notified Dr. Sheets, of Newark, to appear for examination. He took no notice of the summons, but defied the law. At last some members of the Central Dental Association took the case in hand, and it was brought before us last year, and the Prosecutor was directed to proceed against him, and, with the help of some of the members of the Central Association, the case was worked until they had procured sufficient evidence, when it was presented to the Grand Jury of Essex County. When the said Dr. Sheets was given the alternative of appearing before the Board and passing an examination or being indicted, he of course chose the former, appeared at the January meeting, and passed his examination. Thus we will continue, until every dentist who practices in this State shall conform to the law.

The following gentlemen have been summoned year after year, and they take no notice of it: William Armatage, of Allentown; Richard Sheppard, of Phillipsburgh; Jacob Bodine, of Jersey City; Harry B. Lasher, of Freehold; L. H. Russ, of Jersey City; W. S. Toumans, of Jersey City, and L. S. Jones, of Camden. I think the Society should take some action in the matter. There are about twenty who have signified their intention of appearing before the Board, so of all of the dentists practicing, there are only seven who defy the law.

At the January meeting of the Executive Committee a sub-committee was appointed to present a report to this Society upon the growing evil of violation of the "Code of Ethics" by the way of advertisements. I think when this committee reports, that it should be well discussed, for if we are to have a code let us live up to it, if not, let us drop it, as in its present condition it is a dead letter.

At the same meeting a committee of two was appointed to try and prevail upon the dentists in the State to register, and it appears to be up-hill work. There is no trouble about dentists beginning practice, it is those who were in practice before the passage of the law. I would like to impress upon the mind of any dentist here to-day that has not registered, that it is his duty immediately upon his return home to do so. The following are the number of dentists registered, by counties: Bergen, 4; Warren, 1; Passaic, 3; Camden, 13; Hudson, 15; Essex, 14. Ten of those in Camden are *bona fide*, and it appears that three have registered who should not have been allowed.

At that meeting the subject with which you are all familiar, to your sorrow, was brought before the Executive Committee, viz: the rubber question, and it was decided to send Dr. Brown to Washington, to take such action as he thought proper in relation thereto. I received a letter from him stating what he had done, but I will leave that for him to explain to you during this session. It appears that

the New Jersey State Dental Society was the first to take any action in this matter. We can congratulate ourselves that we are free forevermore from being troubled by the agents of the Goodyear Company in relation to the Cummings patent, as it expired on June 7th last, and unless new life should be infused into it, the rubber patent as a nuisance has gone where the woodbine twineth.

I would recommend that the Society take some action in relation to absent members. We have some on our roll that have never appeared since they were elected. All they seem to care for is to get a certificate to hang up in their office, and if a fine was imposed, say for non-attendance for three or four years, and dues not paid, they would be suspended, I think it would have the desired effect. I hope this will not be passed over in silence. I would also suggest that the Executive Committee should use their best endeavors to get dealers and inventors to attend our Conventions and exhibit their materials and improvements. It would tend to make our sessions more interesting.

There is one thing that I feel it my duty to speak of. The committee in whose care was intrusted the publication of the minutes of the Society, have presented the results of their labors, in the shape of a splendidly bound volume of over 200 pages, the most complete report the Society has ever possessed, notwithstanding the predictien of failure made by one of our prominent members. The literary work, which was conducted by our Secretary, shows great care, completeness and considerable literary ability, which was also said not to come within the scope of said party. The business portion, conducted by the Chairman of the Executive Committee, shows good judgment and executive capacity. I am sure that hereafter, when our Society intends to have the proceedings printed, they will know whom to select to do the work, and will rest satisfied that it will be well done. The committee inform me that the total cost of the work was $238.41, and by good financial management enough income was obtained to reduce the cost to the Society to only $45.31. Of the number of copies printed every member obtained one, and the rest were judiciously distributed among the most prominent of the profession throughout the United States, showing to our brother dentists what Jersey is doing in the cause of dental education. In a financial and an educational view, this is an excellent showing, and deserves the thanks of the Society.

I have an idea to suggest that may produce good results in the way of helping our younger members in debating, and a chance to ask and have answered those questions that are constantly intruding upon their minds, but which timidity prevents, viz., that a committee look at the advisability of having a "Quiz Box" on the President's table, in which questions "on the subject matter of any paper read" may be placed, and at the next succeeding session the same taken out, answered and discussed by the members. This has been carried out by one of our local societies, and has been productive of good results in bringing forward many interesting views and opinions.

I would also recommend that a committee be appointed to draft a

resolution in reference to the attempted assassination of the President of the United States, said resolution to be expressive of the sympathy of this Association for President Garfield and his family, with the hope of his speedy recovery.

Gentlemen, in conclusion I beg leave to thank you, one and all, for the hearty efforts and support you have given toward the success of our Society, and I assure you, when I retire from the honorable position to which you have elected me, that I shall continue to take as deep an interest in the welfare of our Association. I bespeak for my successor the same cordial co-operation and support which I have ever found you ready to accord me, and I trust our Society, so beneficial in its objects and results, may live to celebrate many returning anniversaries. I hope the same harmony of feeling and intelligence in action which have heretofore characterized the annual gathering of our State Society will continue. Again I thank you, gentlemen, for the honor you have conferred upon me, the highest within your gift.

DR. BARLOW—I have been very much pleased with that address; I think it is excellent. It contains many valuable suggestions, and I would offer a resolution that the President's address be referred to a committee, to report on the suggestions contained therein—a committee of three, to take such action upon the President's address as may seem proper.

Dr. Barlow's resolution was adopted.

DR. HAYHURST—I do not know that I have much to say in the way of criticism, but I think it is the kind of address that is very valuable and which our President is fortunate in delivering; that is, it contains suggestions of a practical character, and I heartily approve, I think I may say, of all of it. I like the idea of the quizbox. It is a new one to me, and I have lived a good while breathing a dental atmosphere; it is a thing I never thought of before. I often think that we older dentists forget sometimes that there are younger dentists, who feel embarrassed about getting up and discussing questions; we should not forget that the Association is organized for the benefit of the younger members as well as for the benefit of the older ones, and I always feel interested in any suggestion of that kind, whereby the younger members may reap the benefit of the experience of the older ones. I also like the idea of resolutions being drawn up, expressing the sentiments of the Society in the matter of the assassination of the President. That is not a part of the Society's business, yet, as the dentists of New Jersey are a solid part of the community, I think it would be entirely proper. Our President has expressed a great deal in a very few words. He is not given to ornate diction and fine language, but his language is forcible and direct, and very easily understood. There is no misapprehension in the matter. I like the address and its suggestions.

DR. OSMUN—I suggest, and move, that some action be taken in relation to absent members. There should be some fine attached to absence from our meetings. A great many members, as the Presi-

dent says in his address, come here to one or two meetings, and we never see anything more of them. Every man of them ought to be an active member. We don't want any dead wood. I hope the committee will take this matter into consideration, and give it the attention that its importance deserves. That suggestion of a resolution in relation to the assassination of the President is an admirable one, and worthy the attention of the committee.

DR. E. F. HANKS then read the following paper:

## THE TRUTH, THE WHOLE TRUTH, AND NOTHING BUT THE TRUTH, SO FAR AS IN ME LIES.

GENTLEMEN—I come before you to-day not in any boastful spirit, as if the truth, the whole truth, and nothing but the truth, rests exclusively with me. I stand before you, not as the proud conqueror of great difficulties, so pleasing to the self-esteem of all ambitious men, but, as the title of my paper indicates, I am here to chronicle alike failures as well as success. To tell all that I do know, and nothing extenuate.

For fear some gentleman may say, in answer to some of my statements, that I must not judge everybody by myself and assert that a thing cannot be done because I cannot do it, I will say that I have heard that remark before, in fact have used it myself upon occasion, with crushing effect upon mine adversary. I will confine myself, when wishing to prove my point, to the failures of prominent dentists, whose work I hope you will permit me to judge, however much my own performances may be discredited. But if perchance I mention here and there a failure of my own, let us take it for granted that any one else would have succeeded.

Thus much for preface. The particular burden of my theme is failure and success in the salvation of the teeth, and the many strange theories and assertions made before such bodies as this. My theory about the saving of teeth is to me very plain, but to you may sound strangely. When the mouth is in such condition that caries is formed in the teeth, then caries may again be expected, however well they are filled, provided the relations of the teeth to each other and the condition of the mouth remain the same. I contend that our sheet-anchor (after thorough work, which is, of course, imperative,) is the change in condition that occurs somewhere about adult age, and the change in the relation of the teeth.

I believe that no filling material exercises any medicinal or curative influence, and that all metallic fillings exercise, in a slight degree, a harmful influence, from their susceptibility to thermal and magnetic influences. I look upon the filling of a tooth as the stopping of a hole, and he that plugs the hole the tightest stands the best chance of saving the tooth, as the probabilities of success must be best where moisture does not penetrate. But after we have done our best, what have we got (if we have filled with gold or amalgam)? A nice mechanical joint of metal against bone, a conductor against a non-conductor. Does any man in his senses believe that this is

better than a sound tooth, whole in all its parts? Do any of you believe that the filled tooth is better able to withstand the attack of caries than the sound one? But if the sound tooth should become carious within the year, that is a matter of course. But should the filled tooth show the attacks of caries around the fillings in the same time, that is proof positive that the work was poorly done. Out upon such nonsense. It is the childish babble of infants trying to set up a standard so high that it is only reached in the minds of flighty enthusiasts.

Of course, it is utterly impossible to enter into the many and subtle reasons why some teeth become carious in the same mouth that others do not, while all are subjected to the same influence; why certain teeth will show a decided tendency to caries and as suddenly cease, while at the same time other teeth in the same mouth are wasting away under the attack of caries; why old dead and carious teeth, poorly filled with amalgam, will outlast the best efforts of our best men with gold. I am not speaking of particular cases, I am not arguing from the old woman's standpoint, that because my teeth don't do thus and so, no person's must. I wish to state a general proposition, the exceptions from which prove the rule, as there is no general rule without exceptions, that filled teeth are as liable to the attacks of caries as sound ones, provided the conditions and relations are the same.

A dentist stood among us last year and with a great deal of emphasis said that he had patients with frail teeth that he had saved, father, son and daughter, the whole family, yea, even to the very wisdom teeth thereof, with gold. Now, gentlemen, this statement was, I think, very misleading. In the first place, the gentleman said he had patients with frail teeth that he had saved in the manner stated. So have we all of us, perhaps, a few exceptional cases where in all probability a change has taken place for the better. But his dogmatic manner, his emphatic speech, everything he said, left the impression that it was an every-day matter with him, that he was uniformly successful with this class of teeth. I will admit the gentleman's skill as an operator—we all do; it is a fact capable of demonstration. Then, why is it necessary for him to make statements or inferences that we all know to be at least theoretically untrue. Whether so in fact we may never know, as the principal witness is on the other side, and we have no means of knowing to whom his dissatisfied patients go.

This half statement of the gentleman referred to above reminds me of a famous surgeon of New York. He had an operation to perform on the hip joints of two boys that necessitated the removal of the upper portion of the thigh bone and perhaps the joint itself. By the way, one of the boys is now a promising young D. D. S. of Brooklyn. The great difficulty of the operation was to remove the bone so as to leave the periosteum practically uninjured, so that new bone would grow to replace the old. The boys, after the operation, had to undergo all sorts of tortures, having weights attached to their feet to prevent contraction, etc. After a long time, our young dentist recovered and regained almost the normal use of his leg, and,

as a matter of course, the surgeon was very proud of his success. The poor boy was brought up by the Professor very often, and lectured on and examined and questioned by the students at the Medical College, until he was wearied out and thoroughly disgusted. So he thought of a little game to break it up. Upon being called up the last time, he laid in with one of the students to ask the Professor what became of the other boy who was operated upon at the same time. The Professor pretended not to hear, and went on describing the various methods he had used to accomplish the desired object. Our young friend had not calculated for this, but was equal to the occasion, so he signaled his friend to ask again. He did so. Still the Professor was very deaf. But our D. D. S. that was to be piped up in a loud voice and said, meanwhile looking as innocent as a lamb, "Oh, he *died.*"

This little story applies to us as dentists, particularly the best ones. They do things that perhaps are not reserved for the common herd to do. But because they can do so much, is it necessary that they should imagine themselves demigods, and talk as if there was no such thing as failure. "Upon what meat have these men fed, that they have grown so great." They are so puffed up with conceit, they forcibly remind me of "Puck's" picture of the great senator, in which he is represented as a bursting balloon over-filled with gas. We all make failures; there is not that dentist alive that don't make them. It must be so when we look at the nature of the case. Given a substance, soluble alike in alkalis and acids, and bathed in a fluid containing either one or the other, from time to time, we are expected to put in an everlasting filling. The filling is all right if well put in, but how about the substance that seems so hard to the touch, but that melts in some mouths like ice before a summer sun?

Gentlemen, you know not how much courage it has taken to come here, and in the interest of truth, advocate the cause of failure. Will not the strangers among us, ever forgetful of their own failures, but constantly reminded of their many successes, say to themselves that this man is such a conspicuous failure that for the sake of company he thinks everybody makes failures. I know it is not fashionable to make failures, still less to acknowledge them. I know, to get a reputation as a great operator, you must assume a grand air, but above all make no failures, and the nearer you can come to impressing others with the idea that you are a little god on wheels, the greater will be your success.

I mention a few names of men from whose work I have seen failures, not with any intention of giving offence, for I consider every man named a thoroughly good operator; if I did not think so, I certainly would not name them:

Dr. J. W. Cosad, Jersey City.
Dr. F. C. Barlow, Jersey City.
Dr. James C. Clarke, Jersey City.
Dr. D. C. McNaughton, Jersey City.
Dr. Frank Abbot, New York City.
Dr. Charles Francis, New York City.
Dr. Robbins, late of New Brunswick, N. J.

And last, but by no means least, Dr. Wm. H. Atkinson, New York city, has furnished, in the person of one of our members now present among us, Dr. Cosad, a very conspicuous instance of failure in three of his front teeth. Gentlemen, Dr. Atkinson is the father of modern operative dentistry; he has done more than any man living or dead, to sow broadcast the requisite knowledge to successfully fill teeth with cohesive foil. He has traveled near and has traveled far, and has spent time and money, and by precept and by example he has been a boon to the dental profession throughout this broad land. But all his skill, all his knowledge, avail nothing when brought in contact with chemical operations that are so active in some mouths.

I might go on as long as memory served, and cite instances to prove that unless the conditions or relations change, teeth, however well filled, are liable to the attacks of caries. I, of course, know more of my own failures than those of others, as I have seen more of them, to my sorrow. I have a patient who visits me once a month on an average. I have worked faithfully and hard upon her teeth. She is one of the most careful persons I ever knew in caring for her teeth. She has used lime water, dilute carbolic acid, boxes of floss silk, and spends an hour every day cleaning her teeth, but sooner or later caries attacked them again and again. One filling is removed to be replaced by another. I have tried gold, amalgam, oxy-chloride of zinc, gutta-percha, etc., but all to no purpose, in the end it is the same. Her statement is that it has always been the same with the two other dentists who have had the care of her teeth, and I know you will not say it has been for lack of skill on their part when I say that the gentlemen were Drs. Francis and Cosad. At times I have been so discouraged that I have been tempted to discourage her from having anything more done, and let them go, as it seemed robbery to take her money and give such temporary relief, but the least hint in that direction showed me that she would cling to them as long as there was anything left. So we have agreed to watch them closely, fill them as often as they are attacked, and never give up the ship until there is nothing left that will hold a filling. I can commend her as the best and most sensible patient I have.

I hope in all I have said no one will suppose for one moment that I wish to belittle good work or to add to the already too large stock of excuses in use by poor operators. No one among you has a higher regard or esteem for thorough, honest work. My heart warms toward all good operators, and it goes against the grain to have to cut the combs of overweening conceit of some of them, in the cause of truth. But as I said in the beginning, I started out to tell the truth, the whole truth, and nothing but the truth, as far as in me lies, and it now remains with you here present to say whether I have said rightly or not. I know that privately many of you concur with me, but when some pompous, swell operator comes among us and makes statements with domineering positiveness, as he supposes in the interests of first-class work, lo, ye sit as dumb as oysters, for fear in controverting him you will not be considered first-class yourselves. And the cause of truth lags and the positive, domineering perfectionist lords it over all.

DR. OSMUN—I don't know what there is to discuss in that paper. The Doctor has told the truth, and there is hardly anything for us to do but to concur in what he has said. No one who has practiced dentistry for any length of time makes any claim or boast that he has no failures. I had a patient that came to me from the hands of one of the best operators in the country, a man whom you would recognize as a splendid operator, and the teeth which he had filled with gold were every one of them decaying around the marginal surface. But it was no fault of the operator. The patient was sick and he had a bad field to work on. But it was a failure, and one that we must recognize as such. There is a large class of failures that come from poor work, there is no question about that; and there is another class of failures that come from poor judgment, or lack of judgment, in the selection of the filling material. Sometimes the patient is fastidious, wants to have her mouth look cleanly and handsome, and she insists upon having gold, when a plastic filling would be the best for the case. No man can tell what is best adapted to a particular case until he has examined the mouth. I think the paper of Dr. Hanks is an admirable one, and if we had more of those practical papers, they would be of great benefit to us.

DR. WELCH—We are all of us more or less wrapped about with a sense of our importance or perfection, and it is too bad to have a man come and strip it off like this. I can talk very well in class-meeting, but oh, how hard it is to come right out in the rough of life and act out fearlessly and talk out honestly, and appear just what you are. You think it is not professional, that it is lowering your dignity; whereas it is only being yourself. I believe we are honest when we do this very thing, however, and that we generally stand better before the world for doing it. In fact, gentlemen, I think it is more difficult to be hypocrites than we think for. We are generally what we appear to be, and however well we may try to disguise what we are, men will look through us and find us out.

DR. HAYHURST—I do not like to see a paper so valuable as I think this one is, and one having so many good suggestions in it, passed without proper remarks. Not that I expect to enlighten the audience present to a very great degree, but still I think there is matter for thought in that paper that has, probably, not been reached even by the essayist. When you go into Court, and the Clerk offers you the book, and swears you to tell the truth, the whole truth, and nothing but the truth, you generally say yes, but in some cases there is a mental reservation—you are to tell it so far as the lawyers will let you, and so far as you know. If you stop short of the whole truth, or if it is a matter that you don't know anything about, you violate your oath, because you have sworn to tell the whole truth. Now, in the same way, there is something behind these failures. These men that never have failures—and in this room, last year, I heard a man say that there was no such thing as failure in a certain direction, the saving of teeth—should, it seems to me, have some mental reservation in such statements. Look at it for a moment. One would suppose that a man who had not violated any of nature's laws would have all the parts of

his organization in perfect condition, not subject to decay, and that they would last until they were worn out. But there is something behind this, some vice in our ancestry, in our fathers or our mothers, it may be away back several generations, that affects to a greater or less degree the development of every part of our organization. This genteel young lady alluded to has been the victim of some vice of her parents or her grandparents, or some of her progenitors a great way back, which was the incipient cause of the decay here presented to the hands of the dentist. And it is not to be supposed that, when the acids of the mouth have made havoc with the teeth of such a person, and the dentist fills them with gold or some other metal, he has improved on the other parts of the teeth. Not at all. He leaves them in the same exposed condition that they were in before. The acrid fluids of the mouth continue their action as before, and decay attacks the teeth in another place, and it becomes evident that it is never going away until the teeth are destroyed. The dentist, as far as he knows, has done all that can be done; he has prepared the cavity perfectly smooth and clean, has taken out all that was actually under the ban, that was actually destroyed; but he has not taken that which is in process of decay, and which he could not tell, even by microscopic examination, whether it was under the ban or not, which is just beginning to decay—it is not exactly rotten, but nearly so. So, when the dentist has done this, when he has restored all that is already lost, he has made the organization, so far as the teeth go, as good as it was before, but no better; he has done all he can to make it as good as it was before, but he cannot cure the tendency to decay that had its origin generations before his patient was born. A patient will say, when a dentist has filled a tooth, "Doctor, will this tooth last as long as I live?" and he says, "Yes, as long as if it never had decayed." In fact, the parts of the teeth which he did not fill or touch are no better than they were before, and are subject to decay, the same as the parts of the teeth which he did cut away and restore. Let us tell the whole truth.

Dr. Geran—In speaking of failures, the paper mentions several names, Dr. Atkinson's among them. Dr. Atkinson is no more perfect than we are, and there are none of us perfect, but I think Dr. Atkinson has done more to build the profession up to its present standard than any other man in the United States or abroad. I have made some drawings which I think will serve to illustrate some things in connection with this paper. Operative dentistry is the pith and marrow of the profession. I have for many years considered the management of the proximate surfaces of the teeth, and I am quite sure you will agree with me when I say that there is no operation that calls for a closer study or a sounder judgment. In fact, the most of our labor is directed to the care of these surfaces, and the largest number of difficult fillings are upon the bicuspids and molars. Let us, then, consider how we may secure the most lasting operations in these places. It is unnecessary to speak of proximate fillings filed flat, with no attempt to resore the contour of the tooth. Our experience teaches us that such operations be-

long to the old-fogy practice, and should be condemned. When the teeth come in contact with each other, as they invariably do after being separated and filled in the most perfect manner, they are sure to decay around the margins of the teeth. See Dr. Perry on this point. During the last few years I have been restoring to their original shape these teeth. I do not claim that this is new, for I find others doing the same; and it is with a great deal of satisfaction, I assure you, that I am enabled to say that I think it the best method for their preservation. In order to do this, I first separate with rubber for about twenty-four or forty-eight hours; then, in place of the rubber, pack cotton and sandarac. Let it remain a couple of days, when the soreness will have disappeared. Then cut the teeth away enough to get a good wide separation, prepare the cavities, and restore the contour with gold, carrying the gold well out and round, as you see in the drawing. [Referring to paintings exhibited.] By so doing, they are permanently and securely separated, the dentine protected, and a perfect restoration of their contour obtained. You will notice that the contact is of the gold, and the walls are free. Large fillings may be required, which may draw on your vitality and on the patient's purse, but if they are properly done, success will be secured. You will notice in the diagram that the margins of the teeth and the gold are exposed, that the teeth cannot rest in contact, and that the fillings are so shaped as to touch firmly at the grinding surface. If a slight space is left between them at this place, food will crowd through and lodge against the gum, and cause all the annoyance that some of the worst kinds of permanent separation produce. I know that some operators are opposed to contour fillings, claiming unfavorable results from them. All I can say is that they could not have prepared their cavities so as to get good, free margins, well dovetailed, failed to carry their fillings out round and full, and have not been particular when and where the fillings should touch, and that the tooth should not. I would not allow such operators to have any influence over what my experience has taught me is correct.

Dr. G. Carleton Brown—I agree with Dr. Geran in most of his remarks, but I think the inclination in that drawing is to show too much gold. I don't think it is any credit to our profession to show our work, and I think the cases represented in the drawings here can generally be left so as to hide almost entirely the gold; contouring and rounding off the tooth properly, at the same time not making such an exposure of the matter. And I agree with our essayist in most all of his remarks, in fact all, especially in those about dentists coming down here and claiming to do impossible things. They not only do it here, but they do it at the sessions of other societies. At the American Dental Association, last week, one of the dentists claimed that he never, under any circumstances, killed a tooth that had a particle of life in it. Now, I have a patient for whom that very dentist killed a tooth in the worst way—yes, killed the pulp. He put a great big filling right down close on to the pulp, and in six months it was dead and the tooth was decayed around the filling and the filling all shaky. At the same time that the gentleman

made this remark in New York I had treated the tooth and refilled it. Now, those statements are rather broad. When we have such work as this I speak of, I sometimes follow them up. I do not like this running to extremes; I think the truth is more likely to be near the medial point in these things. Another departure of our extreme friend, Dr. Flagg, described in his last work, I believe, is leaving the decayed tissue in the bottom of the cavity, just cutting around the margin.

DR. SCARBOROUGH—I do not feel satisfied to let Dr. Hanks' paper pass without saying a few words upon it. It has rarely been my pleasure to listen to a paper that has been so full of interest to me as that has. It gives the impression throughout that the essayist's thoughts and feelings have come out upon the points he has treated upon freely and without reservation. But there is one idea which the essayist has called up that I would like to have more information upon. Possibly he did explain it, but if so I did not catch it. I refer to the age of the patient he speaks of and the number of years the patient was in his charge. I have had those cases, and I suppose every one of us has had them, where it seemed impossible to save the teeth, even with the best care we could bestow upon them. If we get our patients in the younger walks of life there is one way in which we can measurably meet with success, and that is by suggesting a diet that is full of bone-making material. In many cases the system has not a sufficient supply of that material which is necessary to the preservation of the bones in a healthy condition, but is constantly robbed of that which it needs. The use of fine flour may be instanced. Within a year or two a new process of preparing flour has been introduced which, if I understand it, is a process by which every small particle of the bran is blown out of it, so that the bone-making element is entirely eliminated from that article of diet. I think that when we get patients in the younger walks of life we should suggest such a change in diet as will give them bone-making material, which will have a good effect upon the growing teeth.

DR. HANKS—The lady I spoke of was about twenty-five years old when she came to me, and she has been in my charge about seven years.

DR. HAYHURST—It is a little late and we are so hurried that we cannot discuss the question of how foods are robbed of their bone-making elements, and how the teeth are lost in women bearing children. It is possible that by regulating the diet of women and children their teeth would be better preserved and in better shape.

DR. MEEKER—I wish to add a word and express my appreciation of Dr. Hanks' paper. It does not detract from my dignity one iota. In a paper that Dr. Hanks read some years ago, at Atlantic City, one portion of his remarks ran through my mind for a long time after, and that was where he mentioned that while the dental depots were selling tons of amalgam, the dentists all said they didn't use it; but the dental dealers said they all bought it. The subject of Dr. Scarborough's remarks is something that I was going to speak of myself; and I would like to call your attention, in that connection, to Horsford's Acid Phosphate. I have been using it in my

practice for about a year, in cases of children where there is imperfect dentition, and I am getting surprising results—the formation of good hard cementum and dentine. I had a case which I related to the Central Society, at their last meeting, and which came up from the quiz-box, of a young lady. Her teeth were so imperfect and soft that around the margins of the gums I could scrape the enamel off with my finger. There was no acidity of the mouth whatever, and the medicines given during her illness could not have produced this effect. The only diagnosis I could make of the case was that it was caused by imperfect digestion and assimilation. I prescribed this acid phosphate and she went into the country in the latter end of March. After she had been under this treatment for a month there was a decided change; this peculiar chalky appearance next to the margin of the gum and running down toward the cutting edges of the teeth is gradually leaving, and the teeth are assuming a translucent appearance. I ascribe it to the phosphates that produced that change—and it is a very decided change, the teeth now being of a beautiful pearly texture. In regard to the manner of filling proximal cavities, which Dr. Geran has described and illustrated here, I like that idea. I think that about nine-tenths of our failures in central incisors is due to our desire to make the teeth look so beautiful and white; we try to work from underneath, and we can not do it and do good work. I have made failure after failure in that way. For the last two years I have cut away from the labial surface and made the fillings so you could see them, and I find my work stands well; I have had few failures since then.

Dr. Geran—I want to ask if it is possible to see the effects of medical treatment of any texture of the density of the teeth within one year? Not doubting that the gentleman thinks so, I think it is almost impossible. I would ask in what way the effect is produced or what effect the acid has? In regard to approximate fillings, the gentleman says he cuts down from the labial surface and exposes much of the gold. I think that is often unnecessary. I do just the reverse. If I have to destroy a little of the tooth on the proximal surface I do so, but in order to prevent the gold from showing, I work from the under side. After the separation is made, I think you can work just as well from the under side as you can from the outside. The beauty of it is that you have the cavity in a V shape and not touching under here [referring to drawing] at all. One reasor of so many failures in proximal fillings is that the teeth touch and the fillings do not; after the fillings are in they do not touch at this point at all. I am speaking of incisors, but it will apply to bicuspids and molars. The teeth never should touch, and I don't think we should let the filling be seen if it is possible to cover it up. I had a young lady come to me having two proximal fillings, opposite each other, so made that they showed very prominently on the labial surface. I suggested to her that I could improve their appearance, that I could fix them so the fillings would not show at all. She said she wished I would do so. I separated the teeth, cut them down well into a V shape, cut the filling away so

that it was not seen, filling from the under side; and the fillings are good to-day and are not visible.

DR. WATKINS—I think, from Dr. Geran's last remarks, that he has got on the right track, and I think it is different from his drawings. The drawings represent the cutting away of a great deal of the enamel on the outside, and that would be altogether against my ideas of good practice. I want to say, in regard to the paper read, that I think it a very sensible paper; the remarks in general were given in a very frank and honest kind of way, and it is what some of the New York dentists would call an "honest acknowledgment."

PRESIDENT CLARKE—I would like to call upon a gentleman who is considered one of the best operators in the New Jersey State Dental Society, and who has had considerable work done in his mouth by these gentlemen who say there is no such word as "failure"; I think Dr. Cosad may enlighten us.

DR. COSAD—I will say, and I do it with great pleasure, that I have been highly interested, entertained and profited by the very excellent paper read by Dr. Hanks, the most excellent, perhaps, that I remember ever hearing read, and I feel proud that New Jersey and this Society has a young man who has the courage and boldness to tell the truth, and the whole truth, before all men, no matter what their opinions or prejudices in the matter may be. I will acknowledge myself to be something of a coward in the presence of these men who claim that all things can be done; two or three times I have attempted to oppose this idea and I have been sat down on very severely each time, and I was coward enough to run and never said anything. I do honor any man who has the courage to tell the truth. The truth will prevail in the end. I am well along in life, and I have never yet seen a man so perfect that he makes no failures. While it may be that some are able to save nearly all teeth, or parts of them, that come into their hands, yet usually there are some failures. I find it so in my practice, and I have yet to find the man who, if you can get at the truth of the matter, does not have a failure occasionally. I have been something of a martyr or sufferer under dental operations. I had teeth filled in Boston some sixteen or seventeen years ago; I had a tooth filled by Dr. Streeter, of New York, and one by Dr. Taft, of Cincinnati. Dr. Streeter's filling is to-day as good as when put in; the filling put in by Dr. Taft came out and the tooth was refilled by Dr. Atkinson, and both filling and tooth are gone. Another tooth which was filled by Dr. Atkinson, assisted by Dr. Mills, is here in my mouth for your inspection, if you wish to examine it; the filling is out. It was filled two years ago, and I suffered very severely. Therefore, if such men as Dr. Atkinson, Dr. Mills and Dr. Taft make failures of this kind, they should not come before us here and say there are no failures. I feel proud to be associated with a man that has the courage and the boldness to tell the truth; and I hope it will inspire all of us not only to be as perfect as we can in our work, but to be honest and tell the truth about it.

DR. SCARBOROUGH—Sometimes we undertake a difficult operation on the solicitation of a patient, when in our private opinion we

may fail; and I would like to ask Dr. Cosad whether it was the decided opinion of the gentlemen he has named that they would be successful in his case, or whether they expressed doubts about the success of their work.

DR. COSAD—The fillings were put there for life, or salvation as long as life would last.

On motion of DR. KINGSLEY, the paper was laid over until tomorrow morning for further discussion.

On motion, No. 6 of the order of business was taken up, and Dr. J. C. Hanks, of the Publication Committee, made the following report:

The Committee on Publication of Minutes of 1878–9–80, respectfully beg leave to present the following report:

There were published two hundred and fifty copies of the book, one hundred bound in cloth and one hundred and fifty in paper covers; the cost of printing the same was $219.25, as per voucher marked A. The incidental cost necessary in a work of this description, including mailing circulars and postage in sending the same, as per voucher marked B, was $19.16, making a grand total, as the cost of publication, of $238.41.

As the cost of the proceedings to members, as per resolution assessing the cost *pro rata*, would bring the same to nearly $2.00 per volume, the committee placed themselves in correspondence with all dealers in dental materials in the country, and received for advertisements, in cash, $135.00, $20.00 of this amount being a contribution from the trustees of S. S. White. They also received merchandise for advertisements amounting to $60.00. This merchandise was disposed of at local meetings for $58.10, as per voucher C. For the merchandise, to whom sold, and amounts paid, see voucher marked D. The total amount of cash received being $193.10, which deducted from the cost of publication, $238.41, leaves a balance of $45.31 as the sum total of what it has cost the Society to publish the book. The committee recommend, if necessary, as there are seventy-five active members in the Society, an assessment of $1.00 to the yearly dues, to cover said amounts.

The committee would state that each member of the Society has received a bound volume of the proceedings; also the honorary members, all the dental journals, the most prominent dentists in New Jersey, not members of the Society, some of the prominent newspaper editors, all advertisers two copies each, and the prominent dentists in the United States, the great aim being in thus sending them broadcast to advertise our State Society, and show to the country what we are doing in the way of trying to elevate our profession.

The committee begs to be discharged.

CHAS. A. MEEKER,
J. C. HANKS.

DR. G. C. BROWN—I think the committee have furnished us with of the best, most carefully prepared and revised copies of pro-

ceedings that I have ever seen from any society. I think that in many respects, it is better than the reports furnished by the American Dental Association, of which I have a large number of copies, running a number of years back. I think no State Association whose reports I have examined, has produced as fine a report as we have had presented to us. All the dental journals whose notices I have seen, speak of the report in the very highest terms. I think the Publication Committee deserve a great deal of credit, particularly as at the last annual session there seemed to be some question as to whether the committee were competent to undertake the work of preparing the minutes for publication. I move, Mr. President, that the report of the committee be received and the committee discharged with the thanks of this Association.

The motion was carried unanimously.

DR. J. C. HANKS—The Executive Committee has no regular report to make, except in one particular case, that of Arlington E. Sheets, which you heard explained to-day. There were some law costs in connection with this case, there had to be some money used to defray these expenses incurred in procuring the necessary evidence for the Grand Jury. We received $20 from the Treasurer, of which we expended $11.82, leaving a balance of $8.18 unexpended.

On motion, the report was received and ordered on file.

On motion of DR. HANKS, the Executive Committee was authorized to levy an assessment of one dollar upon each member of the Society, to defray the expense of publishing the minutes.

DR. G. CARLETON BROWN—I would suggest that during this evening session all the gentlemen who are attending this meeting of the Association be requested to favor us with their presence, instead of spending the most of their time on the front piazzas.

PRESIDENT CLARKE—A better plan would be to empower the President to place a Sergeant-at-Arms at the door. If you do, I assure you he will not let any of them out.

DR. WALLACE—I think it was all wrong to change the session to the evening.

PRESIDENT CLARKE—I think it was a very proper thing to do, because the Messrs. Leland have always reduced the price of board to members of the Association, and when we have no evening session the members come here in the day-time, and go down to Asbury Park in the evening to spend their time and money there; the Lelands got no benefit at all and they complained about it. A change had to be made, or else we had to pay regular rates.

DR. BROWN—A good many of the members are not here in the evening, and you cannot get them here.

PRESIDENT CLARKE—Then we must get as many as we can. It makes considerable difference whether we receive a reduction or pay regular rates. If we are going to have afternoon and morning sessions only, then let us pay full rates.

DR. GERAN—I think one objection to evening sessions, instead of afternoon, will be that our friends whom we invite from the city will not have the opportunity to be with us. I know of two or

three who are coming down to-morrow morning; they won't get here before one o'clock, our morning session will be over, and, as they have to return in the afternoon by five or six o'clock, the consequence will be that they will not be present at any session. I think we come here for our own benefit, and not for the benefit of the Messrs. Leland. I don't suppose there is a member here who really cares much whether the expense is three or four dollars a day, so long as he gets his evenings to himself.

DR. OSMUN—Yes, there is.

DR. GERAN—Perhaps so; but I think that if you take the sense of the Association on the question, the majority will prefer afternoon to evening sessions.

On motion, the Convention took a recess until to-morrow morning at 10 o'clock.

## SECOND DAY'S SESSION.

LONG BRANCH, July 21st.

The first business was a clinic, at which an operation for necrosis was performed by Dr. George A. Mills, assisted by Drs. Hubbard, Brown and Watkins.

Before the operation was performed, Dr. Hubbard gave the following history of the case:

*Gentlemen and Members of the New Jersey State Dental Society:*

This patient, Mr. Gray, has kindly consented to come before you in order that you may have an opportunity of studying a most interesting case of necrosis of the superior maxillæ, limited, it is to be hoped, to the alveolar process, but which may extend beyond that and involve the entire upper jaw. The patient came under my observation some three months ago. I noticed that the left superior central and lateral incisors were missing, and that the alveoli of these teeth were partially denuded of the gums and periosteum, and that there was a constant discharge of fetid pus, very offensive to the patient and those with whom he came in contact. In response to my questions, he said that he had never had any arsenical applications made to his teeth, had no knowledge of having been subjected to a course of mercurial treatment at any time, had never engaged in the manufacture of phosphor-matches, and had not contracted syphilis; but he stated that he had met with an acccident, some years ago, while engaged in splitting wood, that the ax-handle flew up and knocked the central incisor out of the jaw, or the socket, and that since that time the left lateral had been removed by a surgeon, who thought the jaw would then get well. It did not get well, but is still discharging fetid pus, as yon will observe. On further questioning the patient, he stated that he had looked for the tooth after the accident, but had failed to find it. With this history of the case and a careful diagnosis, I have come to the conclusion that the central incisor was driven up into the antrum, at the time of the accident, with such force that nature could not remove it, and that it has been

the cause of the necrosed condition now presented. This case being a little complicated, I deemed it wise and prudent to obtain the best counsel in cases of necrosis, caries and alveolar abscess, and I had selected Dr. William H. Atkinson to perform the operation, but in consequence of his being appointed to represent us abroad, and his inability to be present, he selected Dr. George A. Mills to perform it, whose ability and skill as an oral surgeon in treating necrosis, diseases of the gums, and so on, you all know, and who will now proceed with the operation.

Dr. Mills remarked that the case was one of unusual interest to them because of an earnest desire among members of the dental profession to quality themselves to take charge of all the diseased conditions of the oral cavity, the medical profession having greatly neglected the matter for want of a proper understanding of it, or want of interest in this particular field of labor.

Dr. Mills then proceeded with the operation, making an incision under the upper lip and disecting away the gum from the bone about an inch and a half each way, disclosing an aperture in the bone made by the disease, and also disclosing a portion of the necrosed bone contiguous to the foreign body, on the left side toward the nostril. This necrosed bone was cut away with a burr in a dental engine, when the lost tooth was readily seen imbedded in the bone on the right side, longitudinally, with the cutting edge for a presentation, and the apex of the root entering the lower edge of the sphenoid bone. An attempt was made to remove it with a pair of small forceps, which dislodged it, and it slipped off into the cavity formed by the disease, from whence it was drawn with two hooks. It was found to be extensively fractured on the cutting edge, and the root, some three-eighths of an inch from the end, was necrosed and quite black. The wound was thoroughly syringed out with lukewarm salt water, the lips of the wound laid to their place, dressed with a sedative, and the patient dismissed. Dr. Mills stated that when the wound is healed and artificial substitutes for the lost teeth inserted, there will be no disfigurement whatever. The operation occupied about three-quarters of an hour.

On motion of Dr. G. CARLETON BROWN, the Convention passed a unanimous vote of thanks to Drs. Hubbard and Mills, for the able way in which they conducted the clinic.

The election of members was taken up, and R. M. Sanger was duly elected to membership.

On motion of Dr. OSMUN, the next annual meeting was ordered to be held at Long Branch.

On motion of Dr. WELCH, the paper read by Dr. Hanks yesterday, the discussion of which was postponed to this morning, was passed.

Dr. J. A. OSMUN then read the following paper:

## CONSERVATIVE DENTISTRY.

*Mr. President and Gentlemen:*

In taking into consideration a subject so subtle and full of diversities, it will only be possible to touch here and there, with the hope of bringing into prominence some of the extravagant modes of oper-

ating, and suggest a more eclectic practice. All readers of dental literature must have noticed the very decided tendency to abandon the old tried and proved methods of practice, and to substitute in their stead, new and improved ones, and sometimes without proper investigation into their merits. While it is commendable that we should be progressive, yet it is unwise to forget that too rapid growth is enervating, and sometimes the more haste, the less speed. Prove all things first, before we incorporate them into our practice, would be as wise as to embrace every new discovery that is proclaimed. There is a tendency to go to extremes, to ride "hobbies," if you please. We find it exemplified in all the walks of life, and our specialty is no exception to the general rule. To a large extent this has been, however, the result of an earnest endeavor on the part of our co-laborers, to reach perfection and the elevation of our profession, and having no precedents to guide them, it is easy to pardon some of the hobbies which have been fashionable in dental circles.

It has been said that the science of to-day is the ignorance of to-morrow. It certainly is an age of rapid changes. Conditions are constantly altering, fashions and opinions succeeding each other in rapid succession. It behooves us to look well into the merits of any new innovation before we incorporate it in our creed. It is a fact easy of demonstration that many are to-day the unfortunate possessors of artificial dentures, as the direct result of a non-conservative practice. Many truths are arrived at only by experience. One must be willing to make theories accommodate the facts, and not make the facts bend to the theory. An impartial mind will be willing to receive testimony at variance with his own observation, and listen to deductions which seem to conflict with his own judgment, in order to arrive at satisfactory results. The neglect of this precaution has been the source of many fatal errors. It must be admitted that certain men will sometimes possess particular qualifications for some definite mode of manipulation, and that success will crown their efforts, while others would meet with far less satisfactory results. New "ways and means" are continually looming up in the dental horizon, with all the brilliancy of meteors, and for a time seem almost to carry everything before them, and to fairly eclipse the old and tried methods; but after a time the flashing discovery is seen to fade and pass away; then the old familiar "golden methods" stand out full and clear as fixed stars in the dental firmanent, sources of genuine light, shining serenely forever. Hobbies of themselves are not so objectionable, but we contend there are times and places when and where they should not be exhibited. The philosophy of becoming hobby-riders is plain; men think a great while upon one topic, and its importance increases until it absorbs every thing else, and impelled by this high appreciation of their theory, they go on to words and deeds that shall make themselves thoroughly felt. And yet we must give honor to whom honor is due. Some ridicule the idea of being in earnest about anything in this world. Yet earnestness sometimes carries a great weight with it. If it were not for those earnest men who give their whole strength to wresting from the grasp of science all

that can in any way tend to the progress of our life's work, we incline to the opinion that perhaps our specialty would lag. The great deeds of which we have a record have been wrought and accomplished by earnest beliefs and enthusiasms, even though mistaken ones.

Surrounded by the familiar objects of our operating-rooms, it is quite an easy thing to fall into ruts, or to take to our hearts some favorite method, and on its being successful in our hands, forget that there are any other "roads to Rome," and sometimes make the mistake of condemning all other ways opposing ours, as unworthy of attention. Any one yielding to this propensity of following "hobbies," never sees the whole of anything; the urging on of our pet theories will often result in naught. Facts, though empirical, cannot fail of being acceptable and useful. Our profession is eminently a practical one. While it is true we can have no fixed rules of guidance, the underlying principles are unalterable, and no matter what new and brilliant theory beats against them, they stand the same.

With your permission, I will quote from different sources a few items, when you will see that conservatism is quite a stranger. A few months ago, a prominent dentist, who is recognized as a skillful operator, made the remark at a Society meeting that he had ceased to use amalgam, condemning it as a filling material, and intimating that he would never use it again. That sounds quite like a leaf from our dental history, when to use amalgam debarred one from membership in the Societies, etc. You are quite aware of a position assumed by certain equally prominent men, where they have gone quite to the other extreme, and use no gold. Verily, here is a wide difference in practice. Which is right? will be the query of the earnest, thoughtful operator. If one is unqualifiedly right, the other must be equally wrong. Hence, it will be well to look into the claims of both, and ascertain if there are not some good points in each.

When a defective gold filling comes under the eye of an operator, he immediately remarks, "Defective manipulation." When a failure of an amalgam filling presents the same results, he is more than likely to lay it to the material. It is quite possible that the reason assigned to the first failure may be the direct cause of the latter. It requires skill of no mean order to properly put in an amalgam filling, and a little more care in its manipulation might prove to be a good investment. The operator who lacks manipulative aoility to successfully meet the requirements necessary in working gold, will be likely to espouse the cause of the "new departure," thinking, perhaps, he has discovered a field which will suit his talents, to the manifest injury of his patients. A successful and skillful gold operator would be loath to see "plastic" supersede the use of the royal metal.

There are many fine-spun theories and deductions which the light of every-day experience does not justify or sanction. Dr. Samuel Sexton, in an article read before the Medical Society of New York, asserts that the use of amalgam as a filling material is open to severe

criticism. I quote from his article, page 30 of the *American Journal of Medical Science*, January, 1880: "The most universally used filling, excepting perhaps gold, is an amalgam consisting of about two parts of tin and one of silver, and as much mercury as will cause the mass to adhere together. Actual experiments show that 12 grains of tin and silver mixed as above will require 9 grains of mercury to form the cohesive mass used by dentists for filling teeth. When ordinary care is not exercised in the preparation of this material, a larger quantity of mercury would remain." After stating the quantity inserted in a single tooth, he gives the quantity sometimes found in a single mouth, which he puts as high as 20 grains. Then he further states: "This amalgam, composed so largely of mercury, is usually much exposed to attrition of mastication and the movements of the tongue and cheeks. The free mercury which it was found to contain by Dr. William Stratford is worn off in small particles by the friction of the mouth; these particles, when submitted to dilute hydrochloric acid, yield a chloride of mercury. That toxic effects may result from wearing these fillings is, therefore, established."

You will see, gentlemen, what an eminent physician seems to think of the use of amalgam, and I venture the assertion that not one present can substantiate this gentleman's conclusions. This view is somewhat different from that of some of our members, who are using the "plastics," to the complete exclusion of gold. These are the extremes, which the operator in general practice cannot coincide with; his experience must teach him to be conservative, if he wishes to be of the greatest service to mankind.

The organs confided to our care are too valuable to be experimented with, and with so many conflicting claims—as permanent separations and contour, cohesive and soft foil, hand pressure and mallets of various kinds and weights, tin and amalgams and an army of other plastic fillings, which will suggest themselves to your mind—you will readily admit that one should incorporate a large share of conservatism into his practice.

A little conservatism in signing recommendations of various kinds of filling materials and remedies used in our practice, without a complete knowledge of their component parts, etc., would be advisable. All of us, undoubtedly, have seen the most worthless things, with an array of prominent names attached to them, extolling their merits, etc. It is quite possible that many are often deceived and led to purchase the worthless stuff; but it does not stop with the dentist being swindled, patients are made the innocent sufferers.

Conservatism is by no means a laggard in the race of brilliant accomplisments, but it is a steady growth, not an erratic flight, going hither and yon, and always having to return for a fresh start. Extremes beget extremes. A few of our profession are lauding plastic fillings, and have gone so far as to fill front teeth with amalgam—not in exceptional cases, but as a settled practice. And so it goes, each riding some favorite hobby so hard and furiously that he threatens to almost kill the beast.

One other hobby I wish to mention. It is in capping pulps. All

candidates are carefully covered and left to die, and when time shall have tested the wisdom of such procedure, their patients may present themselves with far more "cheek" than they will care to see. We could, if time permitted or it was necessary, go on and point out many "hobbies" which would have a familiar look to you. The riding of hobbies belittles the mind, distorts the truth and cripples the influence. He, who is always on one theme, cannot give full scope to his judgment or reason.

Conservatism believes in all of these things, but first she puts them in the scales of judgment, and under the microscope of common sense, before she accepts any theory into her curriculum. The future possibilities of dental science reach out far beyond the knowledge of any one, and if we are to take the achievements of the past as a guarantee of the accomplishments of the future, certainly we shall feel proud that we are found in the ranks of such earnest workers for the relief of human suffering. But let us be sure that our enthusiasms are properly directed, and eradicate this tendency to go to extremes.

DR. T. B. WELCH—I heard a very intelligent preacher telling, the other day, what he knew about pendulums, and before he was through, he made out that we were all pendulums, never stopping in the centre of any truth. I find it so in the practice of dentistry. All of us have held extremes, and none of us the same extreme, at different times. We are enthusiasts upon one subject to-day, and to-morrow we get away off in another direction upon something else. Perhaps it is well that it is so. It keeps the water from becoming stagnant; it wakes us up from that dull routine that we often get into in spite of ourselves. I like amalgam. I have good reason for liking it. It is my bread and butter. And yet, gentlemen, I believe there are many dentists who are abusing it by over-praising it. I like conservatism, and I like that conservatism that makes one loath to give up tried practice—the old practice of our forefathers, that has been successful with them, with our fathers and our contemporaries. And we should be very careful, I think, in giving up that which is tried for that which is untried, however favorably the new may be presented to us. And, in looking into that which is new, we should be the more loath to take hold of anything that is mysterious, or that is presented in a mysterious manner, and which is assumed to be above our understanding. That which is the most valuable is generally that which is the most simple; that which we can really grasp with our fingers and understand with our intellects, is that which generally proves the most substantial.

DR. FOSTER, of Baltimore—I believe myself in conservative dentistry, and I believe that more good is accomplished in that way than in any other. When I hear gentlemen say they have operated exclusively in one material, I am satisfied in my own mind that those gentlemen must meet with a number of failures. I wish it distinctly understood that I am not advocating any particular line of operating. I believe we are capable of filling teeth with gold, and

with amalgam also. I believe teeth are saved frequently by other plastic materials; but there are no materials that I have come across in my practice that may be considered permanent fillings with the exception of gold, tin and amalgam. I believe the other plastic fillings that require to be renewed so frequently, that must be renewed in a year or less, should be classed as temporary fillings. Conservative dentistry consists in the permanent preservation of the teeth; and that material which, in the judgment of the operator, will preserve the teeth the greatest number of years, is the material for him to use. As the essayist has stated, the use of amalgam was, some years ago, sufficient to bar a gentleman from a dental society. I believe that amalgam is used in too great quantity, and in numbers of cases where other material could be used with advantage. That I consider the fault of the operator, and not the fault of the material. And while I coincide with what the gentleman says as to conservative dentistry, I believe in liberality to all.

DR. HAYHURST—I did not hear any of the paper, but I gather from the discussion that it was something in relation to conservative dentistry, and the use of amalgam in the way of conservative dentistry—

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DR. OSMUN—I would like to set Dr. Hayhurst right before he proceeds. I do not uphold any material. I dislike this running to extremes in the advocating of any special line of operating. I wish to set forth the idea that the dentist should use his judgment in each case. Some teeth it may be proper to fill with gold, others with amalgam; and as his judgment dictates so he should do. No one should go to the extreme of saying he would not fill a tooth with amalgam under any circumstances. That I consider narrow-minded and non-conservative. And to use no filling but amalgam, to the exclusion of gold, is just as far the other way. There are cases in which a gold filling is the best, and others in which only a plastic filling can be used.

DR. HAYHURST—There is no doubt in my mind that my ideas of the matter and those of the last speaker agree; but I will say that in some fields of practice you have got to use amalgam when your judgment would dictate something else. I am situated in a section of the State where there are a great many poor persons, who cannot afford to pay for the use of gold in many cases where I would certainly recommend it, but rather than let them go without anything, and the preservative properties of amalgam being such that it will save their teeth, I have used more of it than I would otherwise do. As to saying that amalgam is the very best thing invented, and that we should use nothing else, as some do, it is just as bad as to say that there is no material fit to be used other than gold. I have no controversy whatever, with the views expressed.

DR. PALMER—In the June number of the *Ohio State Dental Journal* there is a little notice of a new book on plastic fillings, which I think is quite appropriate to the new departure business. It says, "We read of a new departure in the fifteenth chapter of the Gospel by St. Luke. It was not a success. The return was worth two such departures. We are fattening the calf."

It strikes me that eclecticism is a better word than conservatism. I think we should be eclectic rather than conservative, and use that material and that method which, in our experience, and in the experience of others, is the best. If we do that we are eclectics, as I understand that word, and not conservatives. So long as we use those materials that are proved to be the best for certain cases, in that much we are eclectics and do not believe in the new departure school.

DR. E. F. HANKS—We all agree so well with the ideas expressed by Dr. Osmun, and as there seems to be no adverse criticism of the paper, I move that we pass it.

The paper was passed.

On motion, No. 10 of the order of business was taken up.

DR. PALMER—I move that hereafter the election of officers shall be made the first order of business after opening the second session of the first day of the annual meeting.

DR. LEVY—I offer as an amendment that a committee of three be appointed to revise the order of business, and that Dr. Palmer's resolution be referred to that committee.

Motion, as amended, was adopted.

DR. MCNAUGHTON—I move that when we adjourn this session, we adjourn to meet in some city on the west side of the State, to be designated by the President, during the first part of January.

PRESIDENT CLARKE—Do you mean the full Society?

DR. MCNAUGHTON—Yes; instead of the committees.

PRESIDENT CLARKE—That would require a resolution to amend the Constitution and By-Laws to be passed first. The Constitution and By-Laws provide that the annual session shall be held in July.

DR. MCNAUGHTON—Can we not adjourn this session to January, and have that an adjourned session of this meeting?

PRESIDENT CLARKE—No; that would not come under the provisions of the By-Laws. That would require an amendment to the By-Laws authorizing a semi-annual meeting. The rule is that the session shall continue three days, and at the end of the three days this Convention must adjourn *sine die*, or until the next annual meeting.

DR. MEEKER—The By-Laws say that this annual meeting shall occur on the third Wednesday of July, in each year. If you want two meetings a year, you will have to change the Constitution and By-Laws. I call for the reading of the rule.

PRESIDENT CLARKE—Article 7 of the By-Laws, Section 1, says, "The regular meetings of this Society shall be held annually, on the third Wednesday of July, at 10 o'clock A. M., at such place as may be designated by the Society." It would be in order to put the resolution, but it would have to lie over until the next meeting as an amendment to the By-Laws and Constitution.

DR. PECK—I understand that this speaks of an annual meeting, and that Dr. McNaughton wants a semi-annual meeting.

PRESIDENT CLARKE—There is no rule of the Society stating that there shall be a semi-annual meeting of the Society.

DR. MCNAUGHTON—My motion is simply that it be an adjourned meeting.

DR. OSMUN—Is this subject open to discussion?

PRESIDENT CLARKE—I would decide that the resolution, so far as holding the meeting without authority being given by an amendment to the By-Laws, is out of order. If it takes place as an amendment to the By-Laws, it is in order.

DR. PALMER—I understand that it is a motion to adjourn until that time, January.

PRESIDENT CLARKE—I declare that out of order.

DR. WATKINS—This article here in the By-Laws does not specify how long this meeting is to be held. Cannot we hold a meeting here for three days and adjourn for six months?

PRESIDENT CLARKE—No. The time of the meeting of the Society is fixed by the Executive Committee, at the January meeting. That committee have charge of all the business of the Society; they fixed the session to continue three days, and it has to be so.

DR. OSMUN—I do not see any object in having a meeting in January. The majority of dentists are busy then; the slack time is the Summer. If we are going to hold semi-annual meetings, I think we will be all mixed up; some will come at noon, some at night, and some not at all.

DR. LEVY—I would like to ask what committee that motion of Dr. Palmer's is referred to?

PRESIDENT CLARKE—To a committee, when it is appointed. You can refer any motion or resolution to a committee to be appointed. The committee is to be appointed upon the revision of the order of business.

DR. HANKS—I move that the motion in relation to the order of business, which was laid on the table yesterday, be taken from the table.

Motion lost.

DR. MCNAUGHTON offered the following:

*Resolved*, That a special meeting of the Society may be called by the President, if requested by five members, to take place in January.

DR. WATKINS—Cannot we call a special meeting by getting a vote of this Society to that effect now?

PRESIDENT CLARKE—There is no rule for calling a special meeting, if I understand it. This will open the way.

On motion, the Convention took a recess until three o'clock.

## AFTERNOON SESSION.

The Convention was called to order by the President at 3.30 o'clock.

The calling of the roll was dispensed with.

DR. G. CARLETON BROWN read the following paper:

## PATHOLOGY.

In looking over the minutes of the previous meetings of this Society, I find the following general subjects treated in papers:

Nine on Operative Dentistry; nine on Dental Ethics; seven on Mechanical Dentistry; five on Therapeutics; three on Dental Education; three on Dental History; two on Materials for Filling; two on Dental Appliances; two on Anatomy; one on Dentistry; one on Dynamic Force; and one on Pathology, the last being a lecture rather than a paper, delivered by an honorary member and non-resident of our State. And in view of the fact that Pathology is, or should be, a subject for our continual study, I have undertaken what might better have been treated by older and more experienced heads.

Too many of us are inclined to think that the degree of Dental Surgeon has no significance, further than that of the mechanical portion of filling and the insertion of artificial teeth. But it certainly has a wider range than this, and we that have charge of the first and most important part of the alimentary apparatus should not only be able to recognize at a glance any pathological condition that may be presented to us, intentionally or otherwise, but also be able to treat it intelligently, so that we do not have to disgrace ourselves and our profession by sending the patient to the family physician, with a note saying that we think there is a tumor or something in his mouth, and had they not better have it attended to. It should be our constant endeavor to have the physician send *all* cases of oral disease to the dentist, and by this I do not mean merely cases of alveolar abscess, and diseases connected directly with the teeth, but all pathological conditions of the oral cavity and its accessories. The medical profession are beginning to look at us more friendly, I might almost say fraternally, than formerly. They do not now rank the dentist as a cross between a barber and a jeweler; they will now meet us in consultations, and the American Medical Association have even formed a section for dentistry, naming it, Section 7—Oral Surgery. The Medical Congress which meets in London this month, has also formed a section for dentistry, to which all duly qualified dentists are eligible. But now that we have this position, is it only necessary to look at the "gold punchers'" and "putty plasterers'" side of the question? I think we might, with benefit to all, find time for some papers on subjects which are fully as important as dental caries. In this paper I propose to briefly speak of inflammation and its terminations, leaving to a future paper the treatment of the same.

Pathology treats of the tissues in a state of disease, in contradistinction to physiology, which treats of the same in a state of health. Disease is in most cases an abnormal performance of the processes of life, as in inflammation we have a succession of changes which follow an injury to living tissue, provided the injury does not immediately destroy the vitality of the part. The changes which take place during this process, have not, until recently, been fully understood. According to Professors Cohnheim, Stricker and Sanderson, they are, (1) changes in the blood-vessels and circulation; (2) exudation of *liquor sanguinis* and migration of blood corpuscles; and (3) alterations in the nutrition of the inflamed tissue.

In the first of these changes we have swelling, heat, and redness. The swelling is generally considered the result of the over-fullness of the blood-vessels, but this is a mistake, as it is caused by an effusion of what are known as the inflammatory elements. The blood-vessels become somewhat enlarged, the white corpuscles accumulate along the walls, sink into them, and pass through into the surrounding tissue. This is accompanied by a discharge of the *liquor sanguinis*, which is then known by the name of "inflammatory effusion." This migration takes place principally from the veins, some from the capillaries, and not at all from the arteries. In the alteration of the nutrition of inflamed tissue, cells which are normally inactive, become active, send out processes, and multiply. These cells are similar to, and are often confounded with, the escaped leucocytes; but the principal alteration is an impairment, the chief reason being the stagnation of the blood, and the infiltration of the tissue with the escaped inflammatory products. Suppuration and the consequent formation of an abscess is very frequently the result of this inflammatory process. The escaped blood-corpuscles and *liquor sanguinis*, in connection with some cells from the inflamed tissue, form the pus, the volume of which is not only increased by the migration cells, but by their multiplying; but for these inflammatory products to form an abscess, the inflammation must be concentrated, as otherwise the products will be absorbed. The influence of pus on the surrounding tissue is very deleterious, causing its degeneration. Pus, after remaining in the tissues for a long time, may undergo certain changes, and be absorbed, or else become calcified.

Inflammation may terminate by resolution, necrosis, or new growths. By resolution, as is denoted by the name, is meant the restoration of the part to its normal condition. This can only be accomplished by the removal of the primary irritant and all inflammatory products. When the irritant is removed, the normal circulation is restored, the products being removed, principally by the lymphatics. Necrosis is caused by an interference with the circulation—that is, the obstruction of the arteries, veins or capillaries—and is therefore a termination of inflammation, as the inflammatory products press on the vessels and interrupt the blood-flow, thus causing the starvation and death of the part. The disorganization of a part may also result from extreme heat or cold, or the action of a chemical substance, which need not necessarily interfere with the

circulation. The word necrosis is commonly understood to mean death of the hard tissues, while gangrene is the synonymous term for the soft.

These processes may either be circumscribed or diffused. The former is where the process becomes arrested, and the dead tissue is separated from the living, the disunion being shown by the "line of demarcation." The diffused is where no attempt at recovery is made. Necrosis of the maxillary bones frequently results from periostitis, the inflammation of the membrane cutting off the blood supply to the bone. Riggs' disease is probably resultant from a double cause. The person suffering is generally found to be in a poor state of health, from which we have a predisposing constitutional cause in the reduced cardiac force; secondly, we have on the teeth an accumulation of tartar, which produces a local irritation and inflammation in the periosteum, not enough in itself to produce necrosis, but where combined with the constitutional cause we have the disease developed. This theory is in direct opposition to that of many, who consider the salivary deposit as resultant from the constitutional trouble.

Another form of necrosis is found only in persons working in match factories, and is known by the name of phosphor-necrosis. There are two theories as to the action of the phosphorus to produce this lesion. One is that it acts constitutionally, being taken into the system and acting on or through the circulation; the other that it acts locally, by causing the inflammation of the pulp and periosteum of a carious tooth. In support of this theory it is said that the disease never attacks a person who has sound teeth; but the severity of the disease seems to point to a constitutional taint, rather than a merely local irritant. The lower jaw seems to suffer more from this disease than the upper, but in some cases both are affected. The periosteum is especially active, producing new bone even before the old is thrown off. There is one other kind of necrosis which intimately concerns us. This is from the attempted eruption of a wisdom tooth in a too-crowded arch, and is generally found in the lower jaw, on account of lack of room between the second molar and the ramus.

*New Growth.*—To produce any of the new growths, the inflammation must not be intense enough to form pus, but just enough to produce a fibrinous exudation, known as plastic lymph, from which connective tissue is formed. This occurs in the healing of ulcers, union of wounds, etc.

*Tumors.*—The word tumor signifies swelling, although all swellings are not classified as tumors. Tumors are new growths which are independent of the surrounding tissue in their development. They are divided into malignant, or those owing their origin to a constitutional taint, and the non-malignant, which arise from a local cause. The development of non-malignant tumors, is caused by a mechanical or chemical irritation on a part which has some special predisposition, as it is impossible for a local irritation alone to produce tumor; it merely determines its development. Non-malignant tumors are often mistaken for malignant, on account of

their returning after removal. The cause of this is that part of the tumor is left, and the growth continues. The malignant tumors are those which have the power of reproducing themselves in the same or some distant part, but a malignant tumor is not necessarily a cancer. Some of the tumors of this class have the power of returning, but not of reproducing themselves in another part; these are known as "recurrent" tumors. This mode of reproduction is accomplished by the passage of the tumor-cells into the surrounding tissue, thus leaving the seed for another growth. Another place for the frequent reproduction of the tumor is in a neighboring lymphatic gland. This is accomplished by the passage of cellular elements through the lymphatics into a gland, where they are arrested, and cause the formation of a secondary tumor. The remaining method of transmission of the cellular elements is through the blood-vessels, in which way they may be conveyed to some distant part, and reproduced in an organ which is predisposed to such action. But although the recurrence of a malignant growth is very often accomplished by transmission, the appearance of a secondary tumor cannot always be laid to this, as the constitutional cause which produced the primary may, in the same way, produce the secondary tumor. A growth which has a great number of blood-vessels and lymphatics passing through it is therefore much more apt to be malignant in its character than one which has few.

In a case where the elements have been transmitted from a primary tumor to a distant part, Dr. Creighton says their action on the cells of the tissue in which they lodge is similar to that of the sperm-cell on the ovum. It is also held by some that all tumors originate from embryonic cells which have not been utilized in the process of development, instead of from those of mature tissue. The common connective tissue, blood-vessels and lymphatic system are the origin of the greater number of tumors. Next to these the epithelium and gland structures, while from muscle and nerve tissue, they are seldom developed. When a tumor resembles the tissues from which it grows, it is said to be homologous; when it differs from it, heterologous. A tumor in its growth may be circumscribed, merely displacing the surrounding tissue, or diffused, that is, infiltrating the surrounding tissue.

The classification of tumors is a very difficult thing. They may be classified according to their histological character, or upon a clinical base. The former has been the one generally used by pathologists, as they did not consider enough light had yet been thrown upon this subject to warrant a clinical classification; but Dr. Garretson, in his last work, has for the more convenient study of the subject, departed from the rule, and assumed more of the clinical classification as concerns tumors of the oral cavity. The word *epulides* or *epulis*, does not in itself signify any particular tumor; the meaning of the word is, "upon the gum," and it is used in connection with the name of the tumor, as in epulo-sarcomatus, which signifies a sarcoma upon the gum. Among the simplest forms of tumors which come under our notice are the fungus pulps or epulo-fungoid tumors. These we meet in our practice continually, and

are tumors, although among the simplest kind, in spite of some dentists asserting that they are only a lot of gum growing up into the tooth. The epulo-erectile tumors belong to the class of angiomatas, and are those often seen growing between teeth, or in the sockets of teeth that have been removed. They are very vascular, and quite severe hemorrhage may result from wounding them, as in the case of a physician who was asked to look at one in a child's mouth, by a brother practitioner, said it was only an abscess, and plunged his lance into it. No pus, but a great deal of blood, followed his heroic treatment. We have also the fibroma, consisting of fibrous tissue, and arising from connective tissue, submucous or subserous tissue, and from the periosteum. The myxomata, consisting of mucous tissue, and always arising from one of the connective tissues, the submucous being a common origin. The papillomata grow from cutaneous, mucous or serous surfaces. They include the tumors which would come under the head of epulides.

In the osseous tumors, we have as marked examples, exostosis and enostosis. Exostosis probably is always the result of local irritation; it occurs principally on the apexes of the roots of the teeth, and is perfectly innocent, clinically speaking. Enostosis is a tumor which forms in the cavities of bones. Hyperostosis is in bone what hypertrophy is in the soft tissue.

Dr. Geo. A. Mills—I congratulate Dr. Brown very much on his paper; it is certainly an admirable exposition of the subject. I think we have good evidence that in all our sciences we are, from time to time, getting further from ignorance, and coming very much nearer knowledge; and a paper like that is an indication of progress in that direction. We have not been hearing papers of that sort lately here, and I am glad to see young men of promise coming into our Society. Every man who started in the profession twenty-five years ago knows very much better than these young men what the difficulties and hindrances were; those who are coming in now very little realize the opportunities and advantages they have. They should be encouraged, and we have the right to take courage too. The indications of progress are seen, not only in this Society, but in all our large bodies. The paper, in its general aspects, is certainly very interesting; it indicates a good deal of thought and a desire to be helpful to our profession. Dr. Brown is a young man, and a young man of promise, too. The paper, taken in the mass, is a very acceptable paper indeed. Take it as a matter of absolute statement, and it is a paper which, like every other paper, is open to criticism. But the criticisms I would suggest would be such as to encourage rather than to hinder a young man like Dr. Brown. I recollect very well the time when I first began to receive criticisms; I did not know how to take them; I was young and tender, and did not realize the benefit of criticism. Criticism is one of the most helpful things that can be applied to any man's life. We are not standing still; we are traveling on, progressing in every department of science, and we must be glad to read and to listen to anything that comes from anybody, and not tie ourselves down to authorities.

We have some sad examples of that, however, in our professional bodies; they are not what they should have been, and would have been if they had not tied themselves down to things which men have said in their day, and which have a certain amount of truth with a large proportion of error. But these conservative bodies stick to the old notion, error and all. Dr. Brown has fallen into an old error—though he has quite a different way of getting into it—as to what inflammation is. Swelling, heat and redness is the old way of describing it, which means nothing. Inflammatory action is analogous to burning, in every department of matter, whether it belongs to the animal, the mineral or the vegetable kingdom.

I may speak, in this connection, of the prospect we have before us. We have had a more or less bad reputation from the medical profession. Of course, you all know that there has been a disposition to ignore and belittle us on the part of that profession. But the medical profession is now advancing toward us and we toward them. There are a great many things that naturally draw us together. I think we have made ourselves worthy of their attention. The American Medical Association are now, as stated in the paper, forming a Dental Section, and there are many things that indicate our growing strength and importance as a profession, and that the way is open for advancement to every man who has ambition in this direction. If we improve our opportunities and keep pace with the progress of science, medical men generally will soon discover it, and acknowledge that we are a very different class of men from what they have taken us to be. We shall be able to show them that we have not been idle, and that we can bring something to them that will be helpful to them; that we have a field that is entirely new and unoccupied—that of oral surgery, which has been undoubtedly the origin and meaning of our profession. Medical men, in their practice, should come up to the oral cavity and there stop, leaving the treatment of its diseases to ourselves. We all know what terrible mistakes they have made there in the most simple things. While in the anatomy of the general system and the treatment of its diseases they are skillful and worthy of respect, they all seem to be misled when they come to our department, and seem to know very little about operations that have a bearing upon the oral cavity. Undertake to bring a case for diagnosis before a medical man to-day, and he will be utterly at sea with regard to the origin, cause and character of the disease, but will go off into general principles, ignoring entirely the local conditions and circumstances.

The time has come when we should go into council with medical men, and ask them to come into council with us; and we need not worry ourselves much more about consulting medical men, or be afraid of even taking them into our own hands as patients. We know very well that a great many dentists, when a case comes to them which is a little more complicated than a decayed tooth, at once call in a physician for consultation, or transfer the case wholly to a physician. That should be no longer necessary as regards diseases of the oral cavity. When we come to an understanding of the case in hand, and so prepare ourselves that we can say, "I know

what I am about in this case, I understand it fully in all its requirements, and am prepared to treat it—I am master of it," then we will have confidence. I have no other practice in regard to all cases in which the question of constitutional treatment comes up. When the patient says, "What shall I do? am I to go home to my doctor?" I say, "I am to be the doctor in this case; I am going to take charge of it entirely." As a rule, the patient will submit at once. Of course, if you don't feel capable of dealing with a case of disease, then you should consult a medical man you have confidence in; but I am looking to the point when we shall have confidence in our ability to administer these cases ourselves. The treatment of the diseases of the oral cavity belongs to what we call the dental profession, and the question arises, ought that to be settled now or hereafter? This point has got to be met, and there ought not to be any disturbance in the mind of any man in regard to the issue that must take place in our profession. We have been carrying the title of profession, and very properly, and we never would have had the state of things we have if somebody had not taken that course. Now the time has come to make this issue as to oral surgery. My point is that we have got to make a discrimination between dentistry and surgery. They will be classified under the heads of Oral Surgery and Dentistry. I don't make this distinction with any spirit of unjustness or anything of that kind. I have been through the mill with the rest of you, and I know how the thing stands. Probably the time is not far distant when the issue will be made. It is a point that is going to be settled by us. The popular idea of a dentist is a man who takes charge of teeth—the idea is that he is a man who takes charge of the repairing of teeth. That is what it means. I hold that a dentist is a man who has prepared himself to take charge of all the repairing processes in connection with the teeth, embracing the mechanical aspect and the treatment of related tissues. Every one who practices dentistry in the highest sense, embracing the surgery allied to it, the treatment of pulp tissue and other related tissues—just so far as he has qualified himself to take charge of these branches, he in that same degree becomes a surgeon. We know a great many men in the profession to-day who have not gone through the preliminary and preparatory stage of dental education, yet those men have a large amount of common-sense, judgment and experience, which make them justly esteemed in the profession; but they are men to whom the title of surgeon does not apply in any sense of the word. I hold that there is a great difference between a man who performs a surgical operation intelligently and scientifically and one who makes an operation by rote, as we say, without understanding the principles involved or being able to discriminate in different cases. I speak from knowledge. I have seen men who were very bright in a certain direction, and who could fill a tooth very aptly, and perform the lower class of operations by rote, simply from the statements of some other man as to how it should be done, and who had not the ambition or opportunity to investigate for themselves; I have had them come to me and ask me for my counsel upon a case of the simplest kind, which should have

been understood at a glance. And that applies to a great many men of that class. We have to be charitable to men who have not had good opportunities. We are making progress so fast that, take my word for it, the time is coming when we will be in such a position that the medical men will be coming to us; when, as Dr. Atkinson says, we will be at the head of the professional class of men. These are indications of great promise, and should stimulate us to more thorough investigation and study.

DR. WATKINS—If I understood it right, Dr. Brown stated that Riggs' disease was found in persons of anæmic character, in a run-down, weak condition. The cases of Riggs' disease that I have come across, nearly all of them, have been in a very good organism, and in nearly all cases there has been a good set of strong teeth. I have one case in mind now, of a lady forty years of age, who had never been sick a day in her life. She had Riggs' disease, embracing the central and lateral incisors of the upper jaw. The lateral was very loose, and was elongated an eighth or three-sixteenths of an inch, perhaps; it came down so far that the lower teeth were striking and throwing it out of place labially, and it was so loose that you could almost take it out with your fingers. I cut that crown away on the palatine surface, and also cut the end of the tooth off, so as to make it compare in length with the others, removed the tartar and necrosed bone from around it as thoroughly as I could, and I think it was thorough, and I then inserted aromatic sulphuric acid, carrying it almost to the apex of the root. Before I dismissed the patient, I secured the tooth in its place with silk floss. In three days she returned, and I renewed the application of aromatic sulphuric acid and put on new silk floss. In about another week I renewed the silk floss. It is now a year or a year and a half, I think, since the operation. I saw the patient about a week ago, and that tooth is retained and is as firm as any tooth in her mouth. She had a good constitution and new bone was thrown out.

DR. HAYHURST—I think I appreciate the paper, and I understand the fact that to have undertaken and produced a paper of that character there must have been a good deal of research. I think I may safely say, from my experience in getting up anything of that kind, that there is cause for us to feel very thankful to any man in the profession who will take as much pains as has been necessary to produce before us a paper like that. While I have no criticism to make on the paper, and I don't know that I am competent to criticise it, there is a point that I do feel as if I had something to say about, and that is in regard to the recognition by the medical fraternity of our body. The essayist seems to speak in a congratulatory sense of the fact that the medical fraternity are making arrangements to recognize us, and he gives as examples, certain instances where that fraternity have extended to us the right hand of fellowship, by establishing dental sections in their congresses here and there over the world. Now, while I have nothing to say against the medical fraternity for doing this, I have occasion to say to the dental fraternity, don't be too easily absorbed. If we are absorbed, as in a certain case in the city of Philadelphia, an attempt was made

by a medical college to absorb some dental colleges, it would be a very mortifying condition for our profession to be placed in. We have compelled them to recognize us. We have almost gained the victory. We stand upon our rights that we have compelled the world to acknowledge; and while we stand as we are, having accomplished such a grand thing as the establishment and permanent organization of our profession, let us not fritter it away by cringingly accepting any offer that may be made to us. You may remember that in some papers that I have presented here, I have strongly urged that the teachers of this profession should be the members of the profession itself; that while in the beginning, when we were in a transition state, it was difficult to get dentists to teach certain branches of dentistry, and we had to go to the medical profession for teachers. The time has come, thank God, when we are not obliged to do that. We have been in existence long enough to make members who are able to teach the profession from the beginning to the end. It is really a matter for humiliation to look over the list of the professors in our colleges, and see that nearly one-half of the teachers of the profession in our colleges are not members of the profession at all. They are put there to teach certain branches, such as anatomy and pathology, and they care no more for our profession than simply to receive their fees. It is time that dentists stand on the ground they have been building, and not hang to the skirts of another profession that has belittled us as long as they could, and are now condescending enough to "recognize" us. If we are going to be "received" by the medical profession it is only after and because we have forced them to receive us. I hope that now, when we have our own colleges, when we have fought the battle and almost conquered, we will not quietly and peacefully give up and say that we are the tail-end of a profession that has always been sneering at us as gold-punchers, tooth-pullers and that sort of thing. I believe that our profession is as dignified and honorable a profession as any in this country, and I believe that we can maintain our professional standing, if our young men do their duty and make themselves masters of it, and that we will get our teachers hereafter, without going to any other profession for them.

DR. BROWN—I think Dr. Hayhurst has misunderstood my position in regard to the medical associations taking us in. I did not mean that the medical profession has taken us in, but that we had forced them to recognize us as a profession. I don't consider that we have or ought to bow down to them, or they to us.

DR. HAYHURST—I only meant that it might be taken as a consent that we should be taken in by them. You know the history of the case where the University of Pennsylvania gobbled up a whole college. I am not finding any fault about the changed conduct of the medical fraternity toward us, but offering a caution that I feel earnestly is needed in this matter. I am old, and pretty nearly worn out in the profession, but I would like to see it stand until I go under the sod.

DR. J. G. PALMER read the following paper:

## THE CONSERVATIVE TREATMENT OF THE PULP.

What is the Conservative Treatment? what does it mean? and what is it opposed to? are questions likely to be asked concerning such a subject. Webster defines the word conservative as meaning, among other things, "to save, to protect—*that which keeps from injury or* RADICAL *change.*" Consequently it signifies more than the word "preservative," and hence the "conservative treatment" in dental operations, must signify more, embrace different treatment, and secure different and more complete results, than that which is designated simply "preservative."

In speaking of the treatment of the pulp, we necessarily presuppose its exposure, or injury in some way, thus giving rise to a need, either of treating it or of destroying it, and the "conservative treatment" means its preservation if possible, as opposed to its devitalization, which may properly be considered the "radical treatment." I may then speak of the feasibility of the "conservative treatment," of the methods of treatment, and of its superiority.

First, let us glance at the tooth structure, and the relation the pulp bears to the dentine. What is the pulp? It has been described as the "soft vascular part of the tooth within the central chamber," which, though true enough, does not give a definite idea of its relation to the tooth, nor how it became placed within its sheath of dentine and enamel. From without, inward, we have enamel, living membrane, dentine, pulp. The enamel is dense and hard, the dentine somewhat softer, the pulp very soft, being composed of capillary blood-vessels and nerve filaments, held in the meshes of connective tissue, which nerve filaments enter and ramify the tooth structure.

It is not my intention to describe in detail the formation, "in embryo," of the teeth, for we are, or should be, more or less familiar with it. But I desire to refer to some of the changes that occur. While the enamel is being formed from the enveloping sac, at the proper period, begins the formation of the dentine from the papilla, or tooth germ itself. As this formation progresses, the papilla is encroached upon, and grows smaller and smaller, as more dentine is formed from it, until the point of completion is reached, when by some law of nature, the process ceases, and the dentine being completely formed, we have a cavity within, filled with a highly sensitive pulp, the "soft vascular part of a tooth" mentioned before, which is the remainder of the papilla, and consists of blood-vessels and nerve filaments, similar to the ordinary papilla of touch. During this time, the formation of enamel has progressed, and the tooth being completed, in due time we have its eruption.

The enamel, dense and hard, is built up of bundles of rods, called "enamel rods," which hold a very small quantity of living matter in the interstices between them. Some eminent microscopists and observers aver finding this living matter in direct contact and communication with the dentine at the living membrane of the tooth, and the name, "enamel fibres," has been given to this substance.

In the dentine we find canaliculi, or dentinal tubuli, which it is certain contain "dental fibres," which are offshoots of the pulp, and establish communication from the pulp to every part of the dentine, and in all probability, throughout the enamel also. Necessarily then, any exposure of the nerve, even congestion without its exposure, may result in its death, and the removal of all living matter from the dentine and enamel; and we know that such teeth are more brittle than living teeth.

I have said that the dentine was formed from the papilla. It has been found that as old age comes on, the walls of the pulp-chamber seem to encroach upon the pulp, which grows smaller. Evidently, new dentine, or something akin to it, is formed from the pulp, as at an earlier period. Sometimes excrescences will be found within the pulp-chamber encroaching upon the pulp. This new formation is called "secondary dentine," and it is certain, that under favorable circumstances, it will be formed from the pulp. If then, the papilla could build up the dentine, and if, in after years, it has still the power of producing a bony formation, in the shape of secondary dentine, it certainly has the power of building up new material after exposure, if properly cared for. It is now generally admitted that it *does* possess this formative power, and in so much, the "conservative treatment" is certainly feasible: As to the method: The exposed pulp must be carefully protected—put into a healthy condition if need be, so that it may build up this layer of secondary dentine.

In persons in a debilitated condition, suffering from systemic trouble, or constitutional difficulty, it may be useless to attempt it, as the pulp, being a part of the system, it is necessarily affected, more or less, by any disturbance of the functions of life. Even in such cases, thorough medicinal treatment may enable the system to recuperate enough for the benefit of the pulp.

In the case of a person in an ordinary state of health, an attempt may be made to preserve the pulp alive, with almost a positive assurance of success. The cavity in the first place must be thoroughly and carefully cleansed—all debris and broken-down tooth structure being removed. It is then necessary to ascertain the condition of the pulp. If there is merely excitation, with very little or no inflammation, we may proceed at once to stimulate it to action. But if there exists some degree of congestion and inflammation, it will be necessary to use some local application, to reduce and allay it. In *slight* congestion, an application of lead-water, or of aconite and iodine will be efficacious. In *severe* inflammation, it will be well, in addition, to use counter-irritants, hot foot-baths, and possibly internal remedies. By such means, endeavor to allay the inflammation and bring the tooth into the condition first mentioned. A medicament should now be applied, which, while stimulating the pulp to action, should also act as a sedative, and tend to prevent inflammation. Oil of cloves, creasote, carbolic acid, chloroform aconite and landanum, are among the agents often used.

The method that has best pleased me is about as follows: After

the thorough cleansing spoken of, dress the exposed pulp carefully with glycerine and arnica or glycerine and calendula. Then, mixing some oxide of zinc with the drug to be used (preferably dilute carbolic acid), to a thick paste, apply it directly to the pulp and over a large portion of the cavity. Carefully absorb any excess of liquid, and see that the edges of the cavity are all free and clean. Then carefully fill up the cavity with any plastic material, but preferably phosphate of zinc, avoiding as far as possible any pressure upon the pulp. Too much stress cannot be put upon two things: the *careful* preparation of the cavity and extreme care in avoiding pressure upon the pulp. Allow this dressing to remain in the cavity four or five weeks. Then carefully remove the filling, and wash the cavity out gently with tepid water. If progressing favorably, there will be found over the pulp a soft, velvet-like layer, showing, sometimes to the naked eye, fine granulations. This will be soft and thin or thick and hard, as more or less time has elapsed. The dressing should be again applied and sealed as before, and a few weeks more allowed to elapse. On the occasion of the second opening, if the process has continued, it will be safe, using some non-conductor over the new deposit, to proceed with permanent filling.

There are some variations in the result. Of course, after all care, the pulp may die; but the percentage of loss is not large, and if the pulp does die, it will be a painless death in most cases. Again, at the time of the first opening, it may be found that apparently there has been no change. The application should again be made, with such changes in the drug as experience may have taught; and if, at the second opening, there still seems to be no change, the dressing may be again applied, and with some thin metal cap placed over it, to prevent pressure, the cavity may be permanently filled. By such a method, a pulp may be kept a long time without even forming secondary dentine, and some assert their ability to preserve the nerve in one or two roots, when the third root may have been devitalized.

Lastly, as to the superiority of the "conservative treatment." It preserves the tooth, and restores it to its full strength, as far as the supply of nutriment is concerned. It keeps the healthful, glistening, life-like appearance of the whole tooth. It gives to the tooth, by reason of the filaments of living matter ramifying throughout its structure, greater ability to resist decay and to resist fracture. It prevents all danger of trouble from abscesses. On the other hand, the "radical method," the devitalization of the pulp, leaves the tooth shorn of its strength, its nutriment being gone; it loses its glistening, life-like appearance, and becomes dull and opaque—in fact, a dead tooth. Greater than all, by reason of the removal of the living matter from the canaliculi and tubuli, the tooth is more brittle, and will not stand such pressure as a living tooth.

Certainly, then, that treatment which preserves the life, color and strength of the tooth is to be preferred, and it seems to me that it is our duty to do the best we can to preserve the life of the injured, sick or inflamed pulp, when presented to us for our consideration, for while there is life there is hope.

DR. WATKINS—I think the paper is, on the whole, an excellent one. I think the preservation of the pulp is one of the grandest things in dental surgery. Of course, in some cases it is impossible, I suppose, to save the pulp, at least in the hands of most of us, but in most cases I think the pulp can be saved. He speaks of some one saving the pulp in two roots, when one was already dead. I think even that can be done. I have seen cases in my own practice where, after having one root filled, in the molars, the nerves appear to be alive in the others after two or three years' standing; and I think it good practice not to kill them; I think we stand a chance of getting better results by not killing than by killing them. A capping can be put on an ordinary exposed nerve, and even where it is a little more than ordinary it can be done. I have a case that I capped a year and four or five months since. It was a lower wisdom tooth that had been condemned by several dentists in New York, four years before the lady came to me; it was entirely broken down, and the upper wisdom tooth had worked its way down so that it forced its way and fitted itself into the cavity of the lower one. In the first place the centre was enlarged a little, so that it bulged up or rounded up out of the pulp-chamber. I made a saucer-shaped cap of hard rubber, filled that cap with vaseline, placed it right over the nerve and then filled the tooth with amalgam. The filling had to be so thin, after putting on the cap, that at one spot the rubber was exposed. About a month ago the patient was in my office, and as the amalgam was wearing away a little, I took a corundum wheel and cut away some of the grinding surface of the upper wisdom tooth, so as to have a chance to put more amalgam on the lower one that I had so treated; and in making the retaining points for the filling I cut into the dentine of this tooth, and I found that it was then as sensitive and as alive as any tooth you ever saw. That was a year and about five months after I had capped the pulp and filled the crown.

DR. MILLS—In connection with this question of the conservation of the pulp, I am reminded of a little circumstance that took place in the old Brooklyn Dental Society some sixteen years ago. A very worthy man in our profession then undertook to pass a resolution condemning the barbarous practice of attempting to conserve the pulp by capping, or otherwise. That man has lived to see the folly of such a resolution. The practicability of the conservation of the pulp is a foregone conclusion. No sane man now doubts that at all. But, it is interesting to look back and see the severe ordeal that has had to be gone through in bringing this matter to the standard we find to-day. Our ideas regarding the vitality of the pulp, and its possibilities under treatment, have advanced a great deal. We find that we can not only conserve an exposed pulp when we have the whole of it to work upon, but that we can conserve it partially, or the part that may be remaining. I think Dr. Atkinson has been foremost, perhaps, in promulgating this idea of the conservation of the pulp. I had a case in my practice which shows the possibilities of the pulp. I first noticed this case three years ago, next October. It was a lateral incisor which had been in my hands

before, and had been filled; it had been broken off, and when it came to me I found the head of the pulp had sloughed away, and that the remainder of the pulp was living. The patient was twenty-four years of age. I covered the pulp temporarily and made another appointment. I cut away a portion of the pulp to make space enough to put the proper amount of pivot, and applied an artificial crown to that root, and that pulp is living to-day, and is just as healthy a pulp as any pulp could be under the circumstances. It is an isolated case in that particular. It simply shows the possibilities of the pulp under certain circumstances. Now, if the pulp will do that under favorable circumstances, it shows, not that there is no limit to the possibilities of the pulp under proper treatment, but it is enough to show that the tendency of our practice is upward in this direction. And I predict that the time is coming when a great many good men who, to-day, persist in using arsenic, will be ready to see themselves the sin and folly of it. We are coming to understand with greater certainty, the structure of the teeth and their relations to the general organization, and as fast as men become intelligent in that matter, they will "right about face." A man who will persist in the destruction of the pulp, in view of the demonstrated possibilities of its preservative treatment, is either weak or wicked. When I say weak, I mean not intelligent, and I like to see anything that has a tendency to open their eyes. It is not an exaggerated statement to say that hundreds and thousands of people are carrying abscesses in their mouths to-day, that may be traced back to the destruction of a pulp.

DR. BROWN—I think we do not generally understand the pulp as an organ at all. It does a great many queer things. I had a case in our office some time ago, that of a young boy, one of this fidgety kind, who had a six-year molar that was troubling him very much. I could not put an instrument in the tooth to clean it out at all. It was a tooth that would eventually have to come out in order to make room, so I decided to kill the nerve as the only thing to do. The boy was suffering from toothache, and I could not do anything with it permanently. I applied a preparation to kill it, and supposed it did kill it, for I succeeded in putting a broach down each of the roots once, and getting out what I supposed was the most of the pulp. After that I could not get the instrument in at all, as his mouth flew shut like a vice. I put a piece of cotton and sandarac in the tooth, with a little carbolic acid underneath. The boy went off somewhere and was away several months. He came to me on his return, and on taking out this cotton and sandarac, I found that a new pulp had come, or something else that had all the appearance of a pulp, and not a fungus pulp either, but a normal pulp. We treated it some little time and at last I capped it, and it has been going so until the present time and is perfectly well. I have examined it twice since, and found it in good condition and bearing all the characteristics of perfectly normal tissue.

DR. OSMUN—I don't like to see this paper passed without my saying a word of congratulation to Dr. Palmer, on his bringing that paper before the Society. I believe a great deal of what he has said,

and also a considerable part of what Dr. Mills has said, but there seems to be one fact that is overlooked in all these papers and discussions, in regard to conservative pulp-treatment, and that is the condition of your patient and the organic structure of the tissues. There are some very queer and strange things sometimes presented to us. Sometimes you will find a tooth in which the pulp cavity is large and the pulp has been exposed for two, three, or four years, and but little inflammation going on, and it has never developed into anything beyond that. Now, it strikes a man who observes that, that if that tooth had healthy surroundings that pulp could have been preserved. I do not doubt it at all. But I have known cases where the pulp had been covered carefully, and all the skill of eminent practitioners brought to bear to preserve it, and they say, in a year's time that it is a perfect success. But a year's time is no test of the life of a pulp. Wait until five, six, eight, or nine years have gone by, and read its history, and oftentimes it will be a history of the dead. And I don't believe in covering every candidate that presents itself. I believe a great many teeth are better devitalized. The reason that some fail to save a tooth after devitalization is that the operation is not properly done. If the pulp is thoroughly removed and its cavity properly filled to the end of the root, there is not much danger of abscess. Oftentimes we find a patient that has been troubled with an ulcerated tooth, so called; the pulp is carefully covered, and has had pus within its borders for three or five years, according to the condition of the patient; it goes on, and after a while we find a dead pulp has been there, which we considered a live one, and you have an abscess. It is harder to save an abscessed tooth than it is to save one not abscessed. Then, there is another fact, that as people grow old the pulp diminishes in size, sensitiveness and importance. I have taken teeth from the mouths of old persons, in which the pulp-chamber was so small and the pulp so shrunken that you would hardly believe it possible for it to be a live pulp. This shows, that after a tooth is once fully formed, the pulp is to a large extent, superfluous, having performed the functions for which it was created, and after the deposition of the lime salts has taken place, you can sometimes dispense with it and have admirable results.

DR. PALMER—I am afraid you misunderstood me. I said that, after the first opening, under certain circumstances, it might be found that there was no change in the pulp, and then it might be covered a second time, a little cap placed over it, and the tooth filled. I did not advise that treatment in all cases, but said it might be done. The idea of my paper was, that when a nerve is found in a proper condition for treatment, it should be preserved. Some care must be taken to ascertain the condition of the pulp by opening it; it must be carefully covered for a certain time, and after the lapse of that time, when you open it, you will find that a layer of new dentine has been deposited over the pulp; and after it has progressed further, and you again uncover it, you will find that the layer of dentine has increased and hardened, and is sensitive. I have had practical proof of this. This treatment does not always succeed.

The pulp should be covered temporarily with a non-conductor, and opened from time to time for examination, until you are satisfied that a layer of dentine has formed. Then you may safely proceed to fill the tooth permanently without any danger of abscess afterward.

DR. BALDWIN—One idea about the pulp-treatment I did not fully understand. It was that in some cases, as persons came to be older, there was a secondary dentine formed from the pulp itself—that the pulp had a tendency to build up secondary dentine. As I understand that matter, and as I know it is stated in Tomes' celebrated work, only germs, similar to itself in nature, can be produced by the pulp. The pulp will produce germs of its own nature, and how can a pulp produce germs of its own nature without enlarging itself? And if the dentine produces germs of its own nature, then it will produce corpuscles of dentine, and in that case it would be filling up the pulp-cavity and encroaching on the pulp itself. A seed of one kind will not produce another kind, and if you want to have dentine you must have it from germs of dentine.

DR. KINGSLEY—I think we require a great deal of patience in treating these teeth with their pulps exposed, but I think that with a proper exercise of patience we shall finally be able to fill those that have exposed nerves without any protection whatever. I have in mind the case of a girl who came to me; she was a niece of ex-President Grant. I had great interest in her case. Her teeth decayed very early. I found a lateral incisor with an exposed nerve. I washed it out with carbolic acid, wiped it perfectly clean, and put in an oxy-chloride filling or phosphate, I don't know which. I left it so for about six months, at the end of which time she came, and I took out the filling and found the nerve still exposed, but in better condition. I filled it again, and told her to come and see me occasionally for about a year. She did so. I took it out and refilled it again, each time protecting the nerve. About two months ago she came to me, and I thought I could fill the tooth permanently. I took out the filling; there was no exposed pulp there, and I filled it with gold without any trouble at all. I have seen the girl within five days, and she has not had a particle of trouble from that filling.

On motion, the paper was passed.

The committee, to whom the President's address was referred, made the following report, in the matter of the assassination of the President:

The New Jersey State Dental Society, assembled at Long Branch, N. J., hereby desire to express their sentiments of the late attempt at the assassination of the President of the United States; therefore,

*Resolved*, That we look with abhorrence on the act that so nearly resulted in a murder of the most dastardly character, and the destruction of the head of our Government.

*Resolved*, That we feel devoutly thankful for the failure of the cowardly attempt, and rejoice in the prospect of the speedy recovery of our beloved President, and his restoration to health and usefulness.

*Resolved,* That we feel a profound sympathy for his family and near friends, on account of the anxiety that they have felt during his tedious convalescence.

FREDERICK C. BARLOW,
J. HAYHURST,
G. C. BROWN, *Committee.*

On motion, the report was accepted, and the resolutions adopted.

The Committee on the President's Address further reported as follows:

The committee would further recommend, in reference to those who are practicing dentistry in violation of the law, that the whole matter be referred to the "Prosecutor," with instructions that he take up their cases, or such of them as he may deem advisable, and push the same to the full extent of the law; and that the members of the Society be requested to furnish him with all the information in their possession which will aid him in the successful prosecution of the said violators of the law.

They would recommend that the matter of the "*Quiz Box*" be referred to the Executive Committee, with a request to them, to make suitable arrangements to carry out the President's suggestion in that direction.

And further, that the subject of the treatment of the members whose names are on the roll, but who never attend, as well as the subject of an addition to our Code of Ethics, be, and is hereby referred to the Executive Committee for their action thereupon.

All of which is respectfully submitted.

FREDERICK C. BARLOW,
J. HAYHURST,
G. C. BROWN, *Committee.*

On motion, the report was accepted, and the committee discharged.

On motion, the Convention took a recess until to-morrow morning at 10 o'clock.

## THIRD DAY'S SESSION.

LONG BRANCH, July 22.

The Convention was called to order at 10 o'clock, President Clarke in the chair.

DR. S. C. G. WATKINS read the following paper:

## CARE AND TREATMENT OF CHILDREN'S TEETH.

*Mr. President and Gentlemen of the New Jersey State Dental Society:*

As there is but little said or written by members of the dental profession concerning the care and treatment of children and children's teeth, I take this opportunity to express my views.

One of the most important duties that the dental practitioner has to perform is the preservation and proper treatment of the deciduous teeth, when we take into consideration how necessary they are to

the physical development, and when allowed to decay and be lost prematurely, the child will from instinct avoid that which is painful, and by swallowing its food without proper mastication, will bring upon itself the evils of indigestion.. Doubtless, a large number of confirmed dyspeptics received their tendencies to this dreadful malady, owing to the loss of the deciduous teeth before the eruption of a sufficient number of the permanent ones, obliging the child to swallow its food without mastication. The stomach is called upon to do more than its proper share of work, and that member soon weakens, and induces disorders of the system generally. This disorder is one of the most serious evils that result from neglecting the deciduous teeth. But this is not all that is serious. The removal of the deciduous molars at an early date will retard the progress of eruption of the permanent bicuspids, and in that case the child will be an indefinite length of time without proper teeth for mastication. And then, again, if the two temporary molars are removed, one of the bicuspids, not having any guide, is liable to appear in the centre of the space, not leaving any room for the other; therefore it is crowded out of the arch, and by taking away that which nature gave, the jaw will not expand, or be in a fit condition to receive the permanent teeth. The result is a contracted arch. So I would say, be careful, be guided by a good and honest judgment, before you allow a forceps to touch a deciduous tooth.

Parents generally do not appreciate the value of the temporary teeth. As a rule, when they become troublesome, they take the advice of the family physician, and have them extracted. But the pain can generally be alleviated, and the usefulness of the tooth restored by filling with some of the soft fillings, which can be put in quickly. I make it a point in my practice to treat children with great kindness, and gain their confidence at once. The whole treatment of the child may be summed up in a few words, be kind, firm, quick, and never, under any circumstance, deceive a child. Parents, as a rule, use poor judgment with their children in this one particular, and for this reason, it is not well to be guided too much by their advice. I once made a great enemy of a child by doing as the mother insisted that I should do. The temporary teeth are much softer than the permanent ones; therefore they require attention oftener. Parents should be directed and advised to bring their children to the dentist, at the age of two and a half, or three years, and in most cases, even at that age, you will find caries. The child from this age should be under the eye of one responsible dentist, and the parent must be advised of the necessity of bringing it to your notice at least once in six months. In so doing, you may watch the progress of caries, and prevent it in a measure, and take proper care of the six-year molars as they present themselves. Most persons labor under an erroneous idea in regard to the six-year molars, thinking that they belong to the deciduous set, and make no effort to save them, until they have toothache, and then, instead of preserving, insist that they shall be drawn. But if you have the child under your care you will evade this trouble by educating the parent, as well as by watching the teeth.

Another subject that should be brought to the mind of the parent is the diet of the child. Civilization has made many inroads upon the health of this generation, and hereditary transmission of frail, delicately-formed teeth is the rule now, and not the exception. This serious trouble may be much averted by a proper diet, the importance of which should be urged upon the parent, and the parent should be informed of the food containing the necessary elements for the sustenance of the osseous system. The daily use of lime-water should also be advised. It is surprising to note the improvement in a child's teeth after taking lime-water daily for six months or a year.

Children should be instructed to clean their teeth once or twice daily, and not only be instructed to do so, but should be taught the manner in which it should be done, so that they may brush their teeth intelligently; for give any ordinary child a good start, and explain to it the whys and wherefores, and nearly always its good sense will prevail, and it will take pride in being tidy with the teeth, as well as with the hands or face. The bad effect of an unclean and diseased mouth upon the health of the body is of serious consequence. In twenty-four hours we breathe over twenty thousand times, and what must the result be upon a structure so delicate as that of the lungs, when for months and years the air which they receive is drawn through a deposit of filth, and is poisoned by being mixed with the stench arising from decayed, and diseased matter in the mouth.

Occasionally children are brought to our notice who have naturally contracted jaws, and no room for the full number of teeth, except as they are crowded one upon another. In such cases, when the six-year molars are badly decayed, it is sometimes advantageous to remove them, at about the tenth year, so that the twelve-year molar will come in their place, or if the twelve-year molar, at the sixteenth year is a very poor tooth, badly decayed, etc., I would remove it to give room for the wisdom tooth, which, if treated in this way, will generally be a very good tooth, the space left by the extraction filled, and the front teeth will not be driven in an irregular, crowded manner by the wisdom teeth trying to work their way into position in a short jaw.

I would like before I close to say a word about extraction in general. This practice has become altogether of too frequent occurrence. Why? Because, to strike at the root of the matter, many dentists encourage it. Let the dentist protest against it, and let the price be dear for the operation. Take away the anæsthetic, except in cases of the most pressing necessity. Do not, I beg of you, offer a premium for this vile practice. Many persons, for the novelty of the thing, would take gas, and have their teeth drawn painlessly, if the mere pittance of seventy-five cents, or thereabouts, were hinted to them. Dentists of New Jersey, let us exterminate this vile practice from our State if possible. God is all-wise; it is His intention that the teeth should be used to aid in mastication. He has provided for the brute, and protects, and preserves their members. But to man he has given, first, talents, then power and intellect to

improve them. From the unfaithful servant, "He taketh away that which he hath." Let us, then, be faithful, and He will add knowledge to that we already possess. Let us do our part in educating the people in this matter.

DR. HAYHURST—The subject of this paper is one that has been of as much interest to me as any branch of operative dentistry. There is no more embarrassing question, I guess, before the world of dentistry, than this thing of extracting the deciduous teeth. The parents, with softened heart and tender feelings for their offspring, will come to you and say in piteous tones, "My child is suffering so; won't you extract his tooth?" and you examine his teeth and you find that there are certain indications of decay in the deciduous teeth; your sympathies immediately go forth toward the parent and the child, and you inquire what is best to be done; but it is with great difficulty that you divest yourself of this sympathy toward the patient and toward the parent which biases your judgment, and the teeth are likely to be extracted. If you plant yourself down on a philosophic basis, there would be no trouble about it; but how can you ignore the sufferings of a human being? I cannot do it. If you could, you would say, "Let that tooth stay there," even if the crown is off, nearly, or it is decayed in such a manner that it is almost impossible to fill it. While the deciduous teeth are soft and it is very difficult to preserve them, and people say they will go anyhow, that we will lose them anyhow, and all that must be taken into consideration; yet when you come down to the philosophic basis of the thing, you must immediately say, "Let the fangs stay there," because if you extract those teeth you will have a narrow, contracted arch, as may be seen every day. The fangs, if they do not assist in the expansion of the arch, still hold the alveoli there until the permanent teeth are ready to take their places. If they are extracted, as is too often the case, the result is injurious in after-life. It produces, or tends to produce, what I call—I don't know whether the term is original with myself or no—an American face. We have an American face because diet, nervous organization, habits of life and the early extraction of children's teeth all tend toward this contraction of the arch. Look at the English, the Irish and the Germans, and you will not find these narrow arches and hatchet-faces. I think the early extraction of children's teeth is a great evil; I don't say a growing evil, for there is a tendency to look at it in the right light. The more intelligent dentists and people become the less you will see of this peculiar and characteristic American face. I like the tone of the paper generally.

DR. WALLACE—The paper that has been read is, I think, as valuable, in many respects, as any that has been presented before this Association. The preservation of children's teeth is a matter that I have taken considerable interest in for some years, and I have frequently, when children have been sent to my office by their parents to have teeth extracted, sent them home again, telling them that I did not extract deciduous teeth until the time for the eruption of the permanent teeth, and that the deciduous teeth should be

filled. I sometimes see them back again, but in very many cases they go to some other dentist who will take the teeth out. What has been said with reference to the manner of dealing with children and gaining their confidence I am satisfied is correct. Many children are frightened away from the dentist's office and lose the benefit he might give them, simply from the fact that they do not receive the kindness and gentle treatment that they should have. I think also that the diet of children is an important matter and should receive careful and judicious attention. We all know that pastry and light food does not do much toward building up tooth-structure. I have a case in point. A young girl came to my office some nine years ago, a child of delicate health. In the same family was a son who had a strong constitution. They both ate at the same table, the boy taking that food which was plain and wholesome and which would sustain a healthy action, and the girl, being of a delicate, frame, taking more pastry and sweetmeats. The result was that I found it almost impossible to save this girl's eight-year molars. I saw the parents of the child and insisted that they would bring her to my office every three months. I filled the deciduous teeth and preserved them until the time for the eruption of the permanent teeth. That young lady is now eighteen years old, has the eight-year molars yet, and has not lost a tooth. But they were saved only by constant watchfulness and frequent filling operations until she was about the age of fifteen. I frequently said to her, "This is an arduous task for you, but if you can preserve your teeth and preserve your health until the age of fifteen years, you will not have to come to my office so much after that, because at that age your teeth will have become hardened and will not require the attention that they do now." And she found it so. During the last two or three years I have looked at them once in six months. I think that after children pass the age of fifteen years they should visit the dentist's office once in six months to have their teeth carefully looked over. And I endeavour to impress upon them the importance of taking care of their teeth by brushing. Children should be instructed how to clean their teeth. I look upon the paper under discussion as being a very valuable one to this Association.

Dr. G. Carleton Brown—The subject of this paper is a branch upon which I have given considerable thought, and I believe I agree with Dr. Watkins in every particular. The teeth of children are neglected entirely too much. If we devote more care and attention to the first dentition, we won't have so much trouble with the second. And great care should be taken not to frighten a child. If we do no more than get them in the chair the first time they come we have done well. I don't think it is necessary to go to work and do a lot of excavating and put in fillings that you expect to stay there any great length of time. Do just enough to prevent the decay from going on, with the intention of refilling them again in a year or so. And I find that by excision of the proximal cavities in the molars or grinding teeth, the decay is easily arrested. I just cut away enough of the tooth to get rid of the decayed parts and round the edges,

making, instead of two fillings, one V. There is no chance for food to get in and lodge there, the tooth is preserved, and you don't have so much trouble with the second set. I think these teeth are preserved better by separation in this way, in many cases, than they would be by filling. In extracting children's teeth I think dentists are very much to blame. We are to blame for doing it, and more to blame for allowing others to do it. The doctors do it, and the King of Dentists does it. His great hobby is in extracting children's teeth, I believe; he will pull out teeth as fast as they will let him. He very much prefers that sort of thing to taking care of the teeth for their preservation. In regard to the teeth hardening at fifteen years of age, I do not agree with Dr. Wallace in that. I think that the most particular time to look at the teeth is between that age and twenty-one or twenty-two. I don't think there is ever a full ossification until that time. I try to have my patients come in every two or three months, young ladies especially—not on account of their being young ladies, of course—but I think the teeth of young ladies are more inclined to decay than those of the other sex. I believe in having them come pretty often, and when you see any indication of decay, attend to it right away, and in future years you will not have so much trouble.

DR. PALMER—I was not present when Dr. Watkins' paper was read, but I think I gather the gist of it from the remarks of Dr. Brown. In reference to his remarks about physicians, I have found it very difficult, in my practice, to get physicians to do what seems to be proper. In the larger towns, like Newark and Jersey City, no doubt the physicians have more knowledge and more liberal ideas concerning such matters; but in my town we have four or five physicians who will extract teeth and who make it their specialty, seeming to have no idea concerning the preservation of the deciduous teeth. Not more than three weeks ago a little one came to me whose teeth I had watched quite a while, and I had endeavored to inculcate into the minds of her parents the importance of preserving them. The child's mother told me that their family physician had forbidden any further work upon that child's teeth because the child had a sore throat, and he said the sore throat was caused, not by my working on her teeth, but by the fillings. The child had abscesses formed on both sides of the lower jaw.

DR. MEEKER—The remarks of Dr. Hayhurst in regard to the type of face are quite interesting. This type that he speaks of as the American face is, doubtless, wholly confined to the New England States, and is produced by the increased immigration that we have had for so many years to this country. I have noticed this during the last few years. The type he speaks of—I don't say it is a typical American face—is sharp and thin, with prominent chin and high cheek-bones. In this vicinity, among good-looking dentists, we see the absence of this face.

DR. BARLOW—I think dentists should impress upon parents the necessity of filling the deciduous teeth of their children. Parents generally labor under the false notion that it only incurs an expense and does not amount to anything; they think it is money thrown

away, almost, and in a great many instances the dentist, in order to curry favor and make a point with a patient, leaves the parent under that impression. One excuse is that filling the deciduous teeth subjects the child to considerable pain—more than extracting them does. But if dentists would take the trouble to explain to parents the necessity of retaining the deciduous teeth until the permanent ones are ready to appear, I think that in a great many cases they would fill the deciduous teeth where they now extract them.

DR. WALLACE—In reply to what Dr. Brown said with reference to the teeth at fifteen years of age, I will say that I did not undertake to establish it as a rule, but that the teeth generally require less attention after that age. I think we all know that there is less to do; that is, taking children from six to fifteen years of age, I think we find that they require a little less attention after they have passed the age of fifteen than they do previous to it. I have found it difficult to preserve the deciduous teeth, simply from the fact that the great flow of saliva makes it almost impossible to keep the cavities dry, If you cannot get a filling in dry, it is liable to come out. I aim simply to make a temporary filling that will preserve the teeth until such time as they require permanent fillings. In cases where I find a great flow of saliva, I have excavated the cavity, dried it out and filled the tooth with cotton and sandarac varnish, allowing it to remain sometimes two or three months before filling permanently.

DR. HEDGES—I think we fail as dentists to sufficiently impress upon parents the necessity of looking carefully after their children's teeth. We may tell them about the eruption of the teeth, when it should occur and what they should do, and they go away and forget all about it. I have adopted a plan, which I think others might do well to adopt, of giving them a printed card like this. [Card presented.]

DR. LEVY—I have heard a great deal said about filling children's teeth and filling the permanent teeth; but why should not we go still further back, before or behind the temporary teeth, and commence there, for you know prevention is better than cure. The teeth are formed, I think, before birth, that is the first teeth; so why not go to the proper source or root of the matter, and feed the mother on proper foods during the time the child is forming. That has always struck me as being the proper place to start from, and so follow it up. We had an experiment yesterday afternoon, or yesterday forenoon, and I am following that up, and possibly, in the course of a year or so, I shall be able to report progress. I would have been called to show the experiment, as far as it would reach. I refer more particularly to my own child. I propose feeding her, and feeding her teeth in the way that I think they ought to be fed. I don't think I am capable of explaining exactly the treatment, but one thing I propose to do is to keep meat from that child as long as possible, and feed her entirely on grains. As far as I can see now in the child's mouth, it has splendid teeth; only twelve of course, but they are well developed and strong. In my practice I recommend mothers to eat a great deal of grain during the time the child is forming; and although I have not had a chance—have not been

in practice long enough to see the effects, I am in hopes there will be an improvement in the teeth of the children. I have quite a number of children in my practice, and I find it interesting. I mean my practice on the teeth. It is my misfortune not to be able to express what I mean. I think Dr. Mills could say exactly what I want to and without being misunderstood.

DR. MILLS—I don't know but that I can help Dr. Levy out a little. I have had more experience than he has; I have had eight children. One thing is certain, we have got to go back to nature's own laws. Nature makes no mistakes. Though often misinterpreted, nature has never made a mistake. But a divergence from nature's laws has caused a great many wrecks. The best process of dentition is the natural process. I know very well there are marked exceptions, but where nature's laws are not interfered with, where nature takes her regular course and we see nature's laws carried out, we see, as a rule, a perfect set of teeth. In regard to the process of shedding the temporary teeth, we know it is a process of inflammatory action, a provision of nature by which the temporary teeth are to be got rid of, and if nature is not disturbed she performs her work to perfection; but if nature's laws are turned from their proper course we simply work a disburbance and do harm to the teeth and mouth; sometimes in the temporary set, but more particularly in the second eruption of the teeth. We have got to look this matter square in the face and take things as we find them, and use the intelligence we have to the best purpose we can when cases are presented to us. Dr. Meeker has introduced an idea that is an important factor in this whole matter—the effect of the mixing of different races. We have so much to do that we are in too much of a hurry to get at the facts. Men are criticised because they go slow, but slow growth is good growth. There are times when rapidity is of great value, and it would be almost a blunder not to practice for it; but this treatment of the temporary teeth is a primary education, the basis of future work, and if the dentist does his work well, he lays the foundation for future practice. In regard to gaining the confidence of children, which is an important matter, oftentimes the first thing to do is to get rid of the parents who come with them. The parents are apprehensive of some personal discomfort to their children, and its manifestation interferes very much with the dentist's endeavor to quiet the child's fears and gain its confidence. If we have the child placed in our own hands, we can gain its confidence and do what it is necessary to do. Even if we don't accomplish anything at the first sitting but make the children understand that we are their friend and seeking their best interest, we have made a good beginning and removed a great obstacle in the way of successful work. Make a second appointment, or perhaps three or four appointments, before you do any real work, and finally you will succeed. We hear a great deal said about the want of appreciation of our services on the part of the public. The trouble lies with us, not with the public. Water never rises higher than the fountain-head. We have got to educate the people as well as ourselves. Some difference of opinion has been expressed in regard to the age at which the teeth

of young people need most attention. I regard the time between the ages of fifteen and twenty-one, particularly in young ladies, as the most critical period that we have to deal with. Young girls passing through the age of puberty are in an extremely sensitive condition of body and mind, and that has a great deal to do with directing, and causing divergence in, all the operations of growth and repair. It is a period in which we should be very careful and work understandingly, for we can be the means of doing much mischief. I speak more particularly of young girls. Boys are bad enough. This whole matter of the treatment of children's teeth is something that we ought to be patient about and discuss fairly and squarely, for on it lies the ultimate success of our practice. If it is admitted that every divergence from nature's laws causes irregularity, disturbance and harm, should we extract the temporary teeth ? The careless extraction of the temporary, as well as of the permanent teeth, is doing great harm. Dr. Levy is all right in what he said, but I go further than he does. I question somewhat the idea of feeding the teeth, as the gentleman explained. There may be something in it that I do not understand. I am greatly averse to the feeding of meat to children. Particularly with the American people, I think we are feeding too much animal food. I am acquainted with several persons who are vegetarians in the extreme sense of the word; I often notice those persons, and I find they are what we call conservative men and that they have a higher standard of organization. But if you are going back to follow out nature's laws, you must go clear behind the growing child into the germinal matter. The sexual relation is a large and important question. The most eminent neurologists in this country are settling down upon one general principle, that all diseases have their origin in nervous degeneracy. We have got to go back and look this thing square in the face. The time is coming, perhaps, when those who come after us will understand this matter better than we are able to do. One thing in this connection is settled, that the most highly organized material is subject to a greater degree of deflection from outward circumstances than lower organizations. We know that in this country, there is a high state of nervous organization among the people, that there is all about us and in all circumstances, a high-pressure condition largely due to nervous causes. Now, a very large proportion of the children born are generated under these conditions of nervous deflection. Take the germinal matter, the spermatozoa, in a highly nervous organization, and we know very well that that germinal matter is very far from being in a normal condition. It is subject to the pressure of its atmosphere, and the condition of this germinal matter and the circumstances under which the child is generated have very much to do with the condition of its mind and body in the future. A great many people in the community are little more than a bundle of nerves; and their trouble commenced nine months before they were born. There are marked instances on record of difference in children who were generated by the same parents under different sets of circumstances. It sometimes occurs that the first child is the best child, and sometimes the

last child is the best child in the lot. Now, the reason that some are better than the others is that they were conceived under more favorable circumstances. When the progenitors are first married is one of the happiest and most favorable periods for generating well-organized children; they are under new relations of life, generally in good health, filled with all kinds of hopefulness, everything is lovely, and children conceived under such circumstances are likely to be well organized. But go further along in life and the time comes when there is an adverse change in the circumstances of the parents, financial embarrassment, excessive toil, and many cares harass them, and the children then generated reflect the change in circumstances. Children generated during times of financial crisis, when there is commercial disturbance from top to bottom of society, with sudden loss of wealth and comforts, show a marked deflection from the normal condition, due to a like condition of the germinal matter in their progenitors, caused by sympathy with their changed circumstances. It is a falling of the mercury, and the children, when born, are absolutely certain to evidence it.

Then, take a man who is not married until he is forty years of age, and then begets children. The man comes to a state of maturity, and the children generated under such circumstances are very often of an improved standard of organization. I remember a statement I heard a woman make once, which I thought rather remarkable, as coming from a woman, that when we get to the point where children are properly generated, they will never need any regeneration. The meaning of that is, that when we understand nature's laws and conform to them, when everything is working in harmony, then we get a high state of organization, spiritual as well as animal. Nothing can be truer than this. We are passing through a transition state at the present time; the animal and the spiritual in us are struggling with each other. Go back to the prehistoric ages, when the race lived all on the animal side, was more animal and less spiritual, and you see, as shown in the skulls belonging to that period which are preserved in our museums, a first-class type of teeth. In the skulls of the Romans you see a very perfect development of teeth. Then there was a deflection from this standard, and you see in the skulls of those ages the types of all the diseases which we see to-day—caries, necrosis, alveolar abscess, and so on. We must be patient, striving for what is possible, not for what we would like to be, and encouraging the young men who are coming to take our places. As we get upon a higher plane of civilization, where nature's laws will be understood and observed, we shall more clearly see that prevention is better than cure.

DR. MARSH—I like the paper under discussion; it is of a practical character, and such papers we need. Although there may be much in them that we know ourselves beforehand, yet we get a great many grains of knowledge out of them that are useful to us, and it is from such that our practice has become what it is. I want to say a word about the bad results of neglecting to extract children's teeth at the proper time, a point that has not been touched upon. We can extract teeth too soon, and we can also leave them too long.

I have a case, a lady twenty-two years of age, who had a tooth that had been filled twice by a New York dentist, with gold, and the fillings came out. I told her it was a first tooth, which had not been shed yet, at which she was greatly surprised. I extracted the tooth, and the permanent tooth finally came down to its place, but it was of slow growth. In this case, the temporary tooth should have been extracted long before it was.

On motion, the paper was passed.

A motion to take up No. 4 of the order of business was carried.

Dr. Harvey Iredell, of New Brunswick, was proposed for membership—endorsed by Drs. Palmer and Brown—and having been accepted by the Board of Examiners, was thereupon duly elected to membership.

A motion to pass to No. 10 of the order of business was carried.

DR. PALMER—Seeing in Dr. Peck's hands, yesterday, this little instrument, I thought it would be wise to show it to the members. It is a simple tape-holder of his own manufacture, a piece of wire bent, with two pins in each end, springing together in that manner; and it holds the tape without any trouble. Any one of us can make it readily. I understand that Dr. Welch is going to make several of them and give them to the profession. It is the simplest little affair of the kind that I have ever seen, and I desire that it shall appear in the papers as the idea or invention of Dr. Peck, of Morristown. It is a better device for carrying the tape in polishing fillings than any of the $3.50 to $5 devices that I have seen.

DR. LEVY—I would like to call up from the table that motion in relation to revising the order of business, and have the committee appointed. I move that it be taken from the table.

The motion prevailed.

DR. LEVY—I call for the question on the motion now, that a committee of two be appointed. There was an amendment that the committee also revise the By-Laws and Constitution. The vote was not taken on it at all.

DR. MEEKER (Secretary)—That was not seconded, and so it is not down.

DR. LEVY—I call for the question on my motion.

The motion to appoint a committee of two to revise the order of business was then put and carried.

DR. MEEKER—As the President has not appointed this committee under the motion just carried, that the President appoint a committee of two to revise the order of business, I move a new resolution, that the President appoint this committee to revise the Constitution and By-Laws.

PRESIDENT CLARKE—That motion is that a committee be appointed to revise the By-Laws.

DR. MEEKER—To revise the By-Laws; yes, sir.

The motion to appoint a committee of three to revise the By-Laws was put and carried.

The President appointed on the first committee, to revise the order of business, Drs. Levy and Meeker, and on the second, to revise the By-Laws, Drs. Meeker, Levy and Watkins.

DR. LEVY—If you will allow me to offer a suggestion that the gentleman who proposed the motion about revising the By-Laws should be appointed to that committee.

PRESIDENT CLARKE—I thought Dr. Meeker proposed it, and so I appointed him.

DR. LEVY—Dr. Brown was the one who first proposed it.

PRESIDENT CLARKE—Dr. Meeker made the motion that the committee be appointed, and I named him as chairman, according to parliamentary rules. I think Dr. Meeker has work enough already as Secretary, but according to parliamentary usage I had no alternative but to appoint him at the head of this committee, as he made the motion. If the Society desires that he be relieved and that somebody else be appointed on that committee, I am willing to make the change.

DR. MEEKER—I respectfully decline.

PRESIDENT CLARKE—I appoint Dr. G. Carleton Brown in Dr. Meeker's place on the committee to revise the Constitution and By-Laws. The committee now is, Drs. Brown, Levy and Watkins.

DR. BARLOW—I have a supplement to the Dental Code here, offered by Dr. McNaughton, which I will read:

## CODE OF DENTAL ETHICS.

### ARTICLE V.—PATENTS.

It is not derogatory to professional character to hold a patent for an instrument, appliance or preparation relating to dentistry, but rather to be encouraged, as it is believed that such holding will stimulate the inventive genius of individual dentists.

In order that the dentist may do his work understandingly, it is imperative that the ingredients of preparations for treatment, and material to be used in the mouth, be published to the profession. When it is impracticable for a dentist to patent his invention, and when such invention is given to the profession, it is to be considered a professional secret, to be made known only among themselves. And any dentist who shall make use of such a secret, by manufacturing the article or preparation for sale, without the knowledge or permission of the inventor or discoverer, or any dentist recommending instruments, processes or appliances controlled by persons outside of the profession, and having received a consideration of any nature for such recommendation, shall be considered unworthy of any professional consideration.

DR. BARLOW—It was proposed last year and laid over. The committee to whom it was referred would most respectfully report that they consider its adoption advisable.

On motion, the supplement was adopted.

The following report of the Committee on Violations of the Code of Ethics was received and adopted:

The committee appointed on violations of the Code of Ethics would report upon the growing evil in this respect, their attention

having been called to advertisements from which the following quotations were made: "Teeth filled without pain, as low as twenty-five cents;" 'Dr. Blank's tooth powder is the only article in the market for removing stains and tartar without injury;" "Teeth extracted without pain, without the aid of chloroform, gas, ether, or any other anæsthetic;" "Blank's magic corn cure," etc., *ad infinitum*—advertisements which the committee have had sent to them. As our Code of Ethics meets the requirements of these violations, the committee would recommend the expulsion of those members so violating, if, after being notified by the Secretary, the same is continued.

F. C. BARLOW,
CHAS. A. MEEKER,
*Committee.*

DR. BARLOW offered the following resolution, which was adopted:

*Resolved*, That Dr. D. C. McNaughton be accorded the privilege of the personal use of the Registration Lists, in acknowledgment of his services in compiling them.

DR. G. CARLETON BROWN offered the following, which was adopted:

*Resolved*, That the thanks of the Society are due to the Messrs. Leland for the courtesies they have extended to the members of the Society during the present session, and the same are hereby tendered to them.

PRESIDENT CLARKE called upon Dr. Brown for a report of his trip to Washington.

DR. G. C. BROWN—*Mr. President:* I would state that the Executive Committee, at the semi-annual meeting in January, directed me to proceed to Washington at my earliest convenience, and take such action as might be deemed necessary in regard to the extension, if an extension should be asked for, of the Goodyear Dental Vulcanite Company's patents. I did so, and paid a visit to Washington in February. My first call, after arriving in that city, was on Dr. Hunt, whose name I presume you are all familiar with, a gentleman who has had considerable experience in the way of fighting this Vulcanite Company—probably as much as, or more than any man in the profession. I waited on him, and found that although he had, through the papers, been represented to have done considerable, he had actually done nothing with the members of Congress in regard to the proposed extension of the patent; that he had simply gone before the committees of the Senate and House of Representatives, and requested that in case the matter should come up, he might be notified. I then made it my business to call upon different members of the committees, both of the Senate and the House, and through the kindness of your President in sending me some letters of introduction to the Senators and the members of the House from this State, I gained an audience, and I found them to be very gentlemanly and courteous, and they received me very kindly. I stated my business as briefly as I could, showed them my credentials, and

they promised me that they would use their utmost endeavors, in case the matter should come up, to prevent the extension of the Goodyear patent. I went before the committees, and found that no effort had at that time been made, that no application had been made for an extension of this patent. I asked the Secretary of the Senate committee if anything had been brought to his notice in regard to it, and he said there had been nothing. He very kindly placed upon his record book my protest in the matter, for the Society, and said that if any attempt to introduce a bill of that kind was made, he would notify me at once. I also went before a portion of the committee of the House. The chairman of the committee gave me an audience, listened to my explanation, and was at once in full sympathy with us. He said that in case any effort was made to extend the patent, he would use his best endeavors to kill it. Although his attention had not been called to the matter, and no Society, local, State or other, had made any effort, through their members or through the committee, to prevent the extension of this patent, yet I believe that almost every dentist in the land was trembling in his shoes for fear some effort would be made to have this patent extended for another series of years, and we all be subjected to this license-paying that we have had to bear more or less during the last seventeen years.

I also made it my business while there to visit a large number of Senators and members of the House and state my business to them, and so I had the thing in such shape, not only with the committees but with the members who were not on the committees, that in case the matter was brought up, a full and fair exposition of it might be laid before the Senate and the House of Representatives. I think that when I left the city of Washington the work I was commissioned to do had been done as well, perhaps, as one member could possibly do it. I had assurances from these gentlemen, and they were gentlemen whose assurances that they will do a thing may be relied upon—such gentlemen as Senators McPherson and Randolph—I had their assurances that nothing should be done in the matter until I had an opportunity to be heard, and also their promise of assistance. I also called upon several Senators and Representatives from other States, and I felt fully satisfied that if any attempt was made in the last hours of the session of Congress to extend this patent, that it would meet with a warm reception and a strong opposition. I was sorry that I had not the advice and assistance of representatives of other State Societies; I had to paddle my own canoe and do the best I could. And, gentlemen, we can congratulate ourselves that no extension of this patent was granted, and that in all probability none ever will be granted. We are clear now from this tax. Whether, if the holders of the patent had attempted to get through a bill extending it, and without any work on the part of your committee, the attempt would have been successful or not, I am unable to say; but you all know how bills can be passed in the last hours of a Congress; they are rushed through without reading the bills at all, but simply the titles of them, and a great many bills have been put through in that way, of the contents of which the

members who pass them know nothing at all. But I am happy to say that no bill in the interest of this Vulcanite Company was passed; whether any effort was made to introduce one I am unable to say. It is enough to say that none was passed and that we are clear, for the present, from any further trouble on the part of the Goodyear Vulcanite Company.

DR. HAYHURST—I am sorry that this report could not have been made earlier in the session of the Society, so that the different members could have expressed their satisfaction with it, for I believe it is entirely satisfactory and that every member of the Society would feel like congratulating the gentleman who has performed his work so well. I feel like extending my grateful thanks to Dr. Brown for his faithful and intelligent service in the matter. I do not think, however, that we are entirely out of danger. I understand that there is an attachment, or annex, that can be introduced, not as an extension of the Goodyear patent, but as a new patent under the name of Herring's patent, and I don't think we are entirely out of the woods.

DR. BROWN—In connection with that I will say that, having had that called to my notice, I went to the Patent Office and purchased a copy of the specifications, or claims, of the Herring patent, and I found that the claims and specifications are almost identically the same as those of the Goodyear patent. It is claimed that it is a patent, while it, as well as all the iodized rubber patents, was pronounced by the Goodyear Company to be an infringement at that time. I was told that they were substantially the same, and I think there is not any of us that could see any real difference between the Herring patent and the Goodyear patent. The models of the two patents in the Patent Office, which I examined, are almost, yes, just exactly the same thing. There is a little difference in the wording of the specifications, but they are in fact the same thing. And this Herring patent is one that the Goodyear Company themselves had declared to be an infringement upon theirs, and that any dentist attempting to use rubber under that patent would be prosecuted. The Goodyear Company fought it and killed it; not only the Herring patent, but all iodized rubber patents. It went out of existence and the Goodyear Company obtained a monopoly. I have not ascertained, except through the writings of Dr. Hunt, that any effort has been made by the Goodyear Company to renew this old patent. I have ascertained within the last two or three months, from a gentleman who has become connected with the Company, that they had no idea of renewing the Goodyear patent, or of using the other patents in any way, and he mentioned the matter to the Secretary of the Goodyear Company, and he informed him that they did not propose to have anything to do with the Goodyear patent now, but proposed to let the thing go, and that what they now anticipated doing was simply to collect, as far as possible, the judgments they held against dentists, which amount to several hundred thousand dollars; that they had taken up something new and were pushing it as a more important matter, and were leaving the old patents go as they run out. So I do not apprehend any trouble at

present. I have no knowledge of their intention to give us any furthur trouble, except to collect, if they can, the judgments they may have against some of us, as they have turned their attention to, and put their money into, something else.

PRESIDENT CLARKE—I will state that at the January meeting of the Executive Committee this subject was brought up, and Dr. Brown was delegated to go to Washington; that I gave him letters of introduction to Senators McPherson and Randolph, being personally acquainted with both of them, and asked them to post him in relation to the matter. He delivered his letters, and I had an audience with Senator McPherson immediately afterward and talked the matter over with him, and he assured me that there was no danger of the Goodyear Vulcanite Company getting a renewal of their patent. I asked him to watch it closely, as I was afraid that toward the close of the session of the Senate, when bills are put through with great rapidity, they would attach this patent renewal to some bill that was almost foreign to the subject, and it would not be noticed until it was passed and had become a law. He promised me faithfully that he would attend to the matter and that if it should come up in that way, he would stop it immediately; and he is a gentleman whose word you can depend upon.

DR. BROWN—The Postmaster of the Senate was a personal friend of mine, and also was a personal friend of the Secretary of the Senate Committee on Patents, and he took me to his room and introduced me to the Secretary and told him I would state my business. I did so, and he assured me that nothing of the kind should go through his hands—and nothing could go through the Committee on Patents without the Secretary knowing what it was—until I should be informed of it; he entered my name on his books, so that I should be notified at once in case anything of the kind came before the committee. And as a matter of fact, nothing of the kind did go through the committee's hands.

On motion, a vote of thanks to Dr. G. C. Brown, for his efficient action at Washington in relation to the Goodyear Dental Vulcanite Company's patent, was unanimously passed.

DR. G. C. BROWN—There are upon the books of the Society the names of a large number of gentlemen who are in arrears of dues for the length of time specified in the By-laws, and over; some of them have been running for a number of years. Whether they have all been notified previous to my being made Treasurer of your Society or not, I am unable to say, but since that time all of them whom I could reach by letter and bill have been notified twice. I notified them last year on my return home from the annual session, and I also notified them this year. To many I wrote a personal letter, stating that unless their dues were paid before last Tuesday, the provisions of the By-laws would undoubtedly be enforced.

PRESIDENT CLARKE—There is one gentleman with whom I sympathize, on account of the unfortunate situation he is placed in. He has written a letter to Dr. Brown, stating that his arrearage is no fault of his; in fact, he acknowledges the point that he is too poor to pay up. He says that in the condition he is in through

sickness and loss of business, he has made up his mind that all he can attend to is to keep his family from want, and that, being in that condition, he is willing that his name shall be dropped from the roll; he asks it and considers it no disgrace, and says that if business improves so that he can pay what he is owing the Society, he will do it willingly. I think he has the sympathy of the Society in his misfortunes, as he has mine. There is no action the Society can take in the matter of these members in arrears without doing injustice to some of them.

DR. BROWN—I should have mentioned that this gentleman wrote me a letter to that effect, and I felt very much sympathy for him, but I had no discretion in the matter. I have simply given you the gentlemen who are in arrears over the prescribed time. And, while I am on the floor, permit me to make this suggestion to the Committee on Revision of the Constitution and By-laws, that they embody in them an article that no member shall be entitled to vote who is two years in arrears of dues. If a member is in arrears, neglects to pay his dues this year, two dollars stand charged against him; one year from this time four dollars will stand against him. and it is due on the first day of the session, as I understand it; on or before that time. When the session commences he is two years in arrears; and I would suggest that no member be allowed to vote who is in arrears four dollars, or two years dues, as prescribed. I make this suggestion to the committee.

PRESIDENT CLARKE—The names of the gentlemen who are in arrears will be dropped from the roll, according to the provisions of the By-laws.

DR. G. CARLETON BROWN—I move that the gentleman who has been represented to the Society as being in this unfortunate condition be made a corresponding member.

PRESIDENT CLARKE—The gentleman himself asks that this action be taken; he is satisfied that his name be dropped from the roll and does not consider it a disgrace, so I think we had better let it stand. If he wishes to join again all he has to do is to pay up his back dues and he becomes a member of the Society.

One thing I would like to speak of now, and the Executive Committee can take what action they see fit upon it after we close. There appears to be a little dissatisfaction in relation to the election of officers; and it appears that, year after year, we have at the beginning and at the close of our sessions the same faces present; the same gentlemen who take an active part in all the routine work of the Association are here at the beginning of the session, and they are here when we close; and the gentlemen who only make it a point to come down one day to take part in the election of officers, raise a breeze, and express considerable dissatisfaction because, when they get here, the election of officers has been gone through with, according to the regular order of business, and we are engaged in work in which they have not so much interest. Now, I think that three days for a session is too long. I think it would be better to have the Board of Examiners meet one day, and that the session of the Society should be the next succeeding day; that there should be

morning, afternoon and evening sessions, and I think we could get through with our business and the election of officers in one day; every one would know the day set for this business, and if these gentlemen are not here it would be their own lookout. Then if they wish to stay longer after that they can do it. I think the best and most satisfactory way would be to have the election of officers set down for a certain time, or a certain day. If you set it in a certain order on the programme it may be reached on the first day, or it may not be reached until the second day, and being uncertain, some will miss it and object. If the time is fixed definitely, no one can have reason to find fault if he is late. I do not think it is just that those men who do the work and who have been the means of raising the Society to its present position, should be compelled to come here and do the work of the Society, and then be found fault with about the manner in which they have done it, by those gentlemen who only come here one day, or a half a day, and raise dissatisfaction in relation to the order of business. I think that if the Society would take some such action as I have suggested, it might do away with the difficulty and dissatisfaction. I merely make that suggestion before the members now here; the Executive Committee can ascertain what the feeling is among members upon the question and decide upon it at the January meeting. There is nothing in the By-laws requiring the sessions to continue three days; we can have one, two or three days' session as the Executive Committee see fit. If the Executive Committee find, on discussing the question with members, that this idea is popular, they can call the meeting so as to have the election of officers fall on a certain day.

DR. G. CARLETON BROWN—If the Executive Committee call the meeting for one day, and we do not get through with all the business on that day, we can extend the session.

PRESIDENT CLARKE—Certainly, an adjourned meeting can be held. If they want to take up the election on the first day they can do it, if they are here, and if they are not here it is their fault.

DR. LEVY—I would offer a motion to that effect, that our next annual meeting be called for the day succeeding the meeting of the Board of Examiners, and that the election of officers be placed at the evening session, say at nine o'clock.

PRESIDENT CLARKE—I don't think it would be well to set a certain hour for the election; would it not be better to leave it to be brought up at any time during the day, or when it is reached in the order of business, and have each member notified by the Secretary that the order of business will be carried out. If the meeting is called for a certain day and the election of officers comes on that day. it makes no difference whether it comes up at the morning, the evening, or the afternoon session. Members will know that they will have to be here on that day if they want to take part in the election of officers. I don't think it would be proper, with the few members we have present now, to place the election of officers for a particular hour, or for the evening session.

DR. LEVY—The election of officers seems to be the chief attraction with the members; they come here for nothing else; so we might

have a fixed hour for it. I move that the next regular meeting of this Society be called for the third Wednesday in July, and that the election of officers be set down for 9 P. M. of that day.

DR. HAYHURST—I don't know that I am opposed to it. As the President remarked, the same faces are here at the opening of the session and the same faces are here at the close, and they are not many to make such a change. The very cream of the joke is here, we will admit, but at the same time we are few, and I would rather, if it is possible, have the change made in such a manner that there would be no carping criticism afterward. I don't know that it can be done; but suppose the matter be laid over now, and the committee go on, with the understanding that the change proposed will be made next year. The Executive Committee may name two days for next year's session instead of three days, and then you can bring this matter up and see what the feeling is in the Society with regard to it.

PRESIDENT CLARKE—If you name two days you will have the same difficulty as you have now, about the election; it may come up on the first day, and it might not be reached until the second day. If the meeting is called for one certain day, members will have no excuse for not being here; and if the election of officers is not reached they can remain over night. The motion is to call the meeting for one day, next year, to give it a trial.

DR. G. CARLETON BROWN—I offer an amendment that the next session be held for two days. If we hold the election on the evening of the first day we are bound to catch the members, for if they come here for the election that evening, they are bound to be here the next morning also.

PRESIDENT CLARKE—I think it is important to follow a regular order of business as printed. There is a regular order of business printed and every member gets one, and if you only have the session for one day on that order of business, the members will have to come on that day.

DR. BROWN—I will admit that, but as long as we hold the election in the evening of the first day we are bound to catch them the next morning, for they will have to stay over night. This is a tremendous change, from three days to one. If there is only one day, some won't come who would if there is two days. Let us come down one day and make the election right in the middle of the session—the evening of the first day—and see how it will work. I make a motion to that effect as an amendment to the resolution.

DR. LEVY—If Dr. Brown will allow me I will put my motion in this form: That the next annual meeting of this Society shall be on the third Wednesday in July, commencing at 10 o'clock A. M., and continuing in session until adjournment, and that the special order of business for Wednesday, at 9 P. M., shall be the election of officers.

Dr. Levy's motion was carried.

After the formal installation of the officers-elect, and the passing of a vote of thanks to the retiring officers for their able administration, the Convention adjourned.

# PROCEEDINGS

OF THE

# NEW JERSEY STATE DENTAL SOCIETY.

## TWELFTH ANNUAL SESSION.

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LONG BRANCH, July 19, 1882.

The President, DR. F. C. BARLOW, called the Convention to order, and the Secretary, DR. CHARLES A. MEEKER, called the roll.

The opening prayer was, on motion, dispensed with.

The Secretary read the minutes of the last annual session.

The following proposals for membership were read by the Secretary: Dr. George A. Bradford, of Bayonne—sponsors, Drs. Watkins and G. Carleton Brown; Dr. J. M. Vandewater, of Madison—sponsors, Drs. Levy and Meeker; Dr. T. Neumenz, of Brooklyn—sponsors, Drs. Barlow and Meeker.

The question of the eligibility of Dr. Neumenz for membership, on account of being a non-resident of the State, was raised, and the President stated that Dr. Neumenz claimed to be now a resident of Jersey City.

On motion of DR. OSMUN, the nominations were referred to the Examining Board.

DR. CLARKE—The Examining Board respectfully report that during the last year they have examined four candidates, two of whom they report favorably, namely, George R. Whitfield and Ellis F. Potter. The Board also report favorably the names of George A. Bradford, J. M. Vandewater and T. Neumenz.

On motion of DR. OSMUN, the report was accepted.

DR. OSMUN, of the Executive Committee, stated that the committee was not prepared to make its full report, and he asked leave to report later in the session. He announced that Drs. Evans and Bonwill would give clinics on Thursday afternoon.

DR. MCNAUGHTON, of the Registration Committee, reported that the Registration Committee have had new lists of dentists printed, but they are not ready for distribution, as there are several changes to be

made, a few names to be added, and one or two to be stricken out. It will be submitted later in the session. The report was accepted

DR. LEVY—The Committee on Revising the Order of Business would offer, as their report, the order of business printed on the programme for this year, and ask to be dismissed.

DR. WATKINS—There has been a discussion, from year to year, in regard to that part of the order of business which calls for the selection of a place for meeting the following year, and, in the new order of business, that has been left off entirely. In my opinion it would be well to have it on.

DR. OSMUN—Two years ago, it was voted to make Long Branch the permanent place of meeting; but if I understand the Constitution right, it requires that at each meeting there shall be a ballot for the next place of meeting. I think we will have to vote upon the question of the next place of meeting.

DR. WATKINS—The Constitution calls for that, but they say that we decided, two or three years ago, that Long Branch should be the permanent place of meeting. I, for one, do not like the idea of being bound to meet at Long Branch every year.

DR. LEVY—I rise to a point of order. We are not on the discussion of the question of where we are going to meet next year, but on the adoption of the report. The committee did not think it worth while to specify in regard to balloting for a place of meeting. That could very properly come under the head of new and miscellaneous business.

DR. CLARKE—As far as the meeting-place is concerned, it is on our books now, by resolution of the Society, that Long Branch be the permanent place of meeting, but that can be rescinded at any meeting, and if it is not placed on the order of business, the place of meeting can be made different every year, and can come up at any time during the session. If it is on the order of business it may come up when a part of the members are here and others are away, and when the stragglers come they say, "Well, I wanted to vote on the place of holding the next annual meeting, but you have fixed it without my having anything to say." Now, if the question is left open and not put on the order of business, you can bring it up and settle it at any time.

DR. PALMER—Was the report of the committee simply for this meeting, or is it a permanent order of business?

PRESIDENT BARLOW—Only for this meeting, as I understand it.

DR. MEEKER—The resolution reads that the committee shall formulate a new order of business for this meeting, and that is what they have done, and you are using it. I do not see how you can change it.

On motion of DR. OSMUN, the report of the committee was accepted.

DR. G. CARLETON BROWN—Shall I go on with the report of the Committee on Constitution and By-Laws now?

DR. CLARKE—I think it would be better to wait until we have a larger session.

On motion of DR. GEO. C. BROWN, the hearing of the report of the Committee on By-Laws and Constitution was deferred.

DR. CLARKE—I move that the resolution making Long Branch the permanent meeting-place of the Society be rescinded.

DR. G. CARLETON BROWN—I think that question will come in when we take up the Constitution and By-Laws. It was not a resolution which fixed the permanent meeting-place at Long Branch, three years ago; it was a change in the Constitution, I take it.

DR. MEEKER—It was made a permanent meeting-place by standing resolution.

DR. LEVY called for the previous question, and Dr. Clarke's motion was put and carried.

DR. OSMUN—I move that our next annual meeting be held at Asbury Park. And in reference to my motion I would say that I saw Mayor Bradley, of Asbury Park, last evening, and he informed me that we can have the use of Educational Hall free of charge. I also went to some of the hotels to ascertain the price of board, and I was told by the proprietors that although they could not tell what the rates would be next year, if it was this year, they would have made them as low as two dollars a day.

DR. CLARKE—I hope that Dr. Osmun will withdraw his resolution until we have a fuller house; not that I object to the resolution.

DR. OSMUN—I withdraw it.

DR. MCNAUGHTON—I understood the Secretary to say that he had quite a number of copies of the Constitution and By-Laws at his home. I think it would help us very materially if each member of the Society had a copy here, in order to compare them with the proposed amendments; therefore I move that the Secretary endeavor to procure such copies for the use of the Society and have them here by the time the proposed amendments to the Constitution and By-Laws are taken up for consideration.

DR. MEEKER—I laid the books out for the purpose of bringing them when I came, but forgot to put them in my box. I can telegraph for them.

Dr. Mc. Naughton's resolution was passed.

DR. MEEKER—I have received a communication from the Dean of the dental department of the University of Maryland, which I will read.

BALTIMORE, July 10, 1882.

*Dr. Charles A. Meeker, Secretary, etc.:*

DEAR SIR—By the announcement of the dental department of the University of Maryland, you will learn that a beneficiary student is received from each State Society, on the payment of but half of the tuition fees. Already, some thirteen State Societies have appointed worthy young men to such scholarships in the dental department of the University of Maryland, for the coming session of 1882-83. Please have such a beneficiary student appointed by your State Society at its approaching meeting. Experience of over twenty years as dean and professor of a dental college enables me to assure you that the advantages offered dental students by the dental department of the University of Maryland far excel any that a separate dental school can command.

Respectfully yours, F. G. S. GORGAS, *Dean, etc.*

On motion of DR. GEO. C. BROWN, the communication was received.

DR. OSMUN moved that a committee of two be appointed to select a student.

DR. WATKINS moved to amend, that the question lie over until more members shall be present.

DR. MEEKER stated that the matter properly goes to the Examining Board.

DR. PALMER offered an amendment that the Examining Board have power to appoint a student.

DR. BALDWIN—That is not what they require; they require that the Society shall select a student, or else the President, when the Society is not in session.

DR. CLARKE—Originally the President made the appointment, but at one session it was referred to the Examining Board to make an examination and select a name to send in. The President did originally appoint. I think it was at the time Dr. Welch was President; he had a student he wanted to send, and the matter was referred to the Examining Board and left to them.

DR. PALMER—The Examining Board may be supposed to be the representatives of the Society; I do not see any objection to referring the matter to them.

DR. MEEKER—I move that we go into the election of members, from the names that have been proposed for membership, and reported favorably by the Board of Examiners.

Motion adopted; Drs. Baldwin and G. Carleton Brown appointed tellers.

On motion of DR. BALDWIN, the Secretary was authorized to cast the ballot of the Society in favor of the candidates, viz.: George A. Bradford, J. M. Vandewater and T. Neumenz. Drs. Bradford and Neumenz were declared elected. Dr. Vandewater not being present, Dr. Levy moved that his name lie on the table, and it was so ordered.

DR. MEEKER—Through a mistake of the compositor, the name of Dr. C. D. Cheney, of Hoboken, was left off the progamme. I would make this explanation to the meeting.

On motion of DR. LEVY, the Society took a recess until 8 P. M.

## EVENING SESSION.

At 8 P. M. the Convention was called to order by the President, and the Secretary called the roll.

The following applications for membership were received: Dr. A. W. Erwin, of Camden—sponsors, Drs. G. Carleton Brown and Meeker; Dr. C. W. F. Holbrook, of Newark—sponsors, Drs. Osmun and Clarke; Dr. W. W. Evans, of Washington, D. C., for honorary membership—sponsors, Drs. Osmun and Clarke. The applications were referred to the Examining Board. The Examining Board, through Dr. Clarke, reported favorably upon the applications, the Secretary was authorized to cast the ballot of the Society for the gentlemen named, and they were declared duly elected. Dr. J. M.

Vandewater, being now present, was in the same manner elected to membership in the Society.

DR. OSMUN offered the following resolution, which was adopted:

*Resolved*, That hereafter the Examining Board shall donate the amount fixed by law as their compensation, to the Society.

DR. CLARKE—I think we have as many members here now as we shall have, and we may name the place of holding the next annual meeting. I move that the Society name Asbury Park as the place for holding the next annual meeting.

The motion was seconded by DR. LEVY, and adopted.

DR. OSMUN moved that all other rules be suspended and that the Convention go into the election of officers for the ensuing year.

DR. LEVY objected, on the ground that the election of officers had been set for a specified hour, and that hour had not yet arrived.

On motion of DR. HUBBARD, the Convention took a recess of fifteen minutes, or until 9 o'clock.

At 9 o'clock the President called the Convention to order, and a motion of Dr. Clarke that the election of officers for the ensuing year be proceeded with was adopted.

DR. CLARKE—In nominating the gentleman I do for the position of President of this Society, I take great pleasure, because, having been associated with him some time, I know him well and consider that he would do honor to the position if elected to it. I nominate Dr. James G. Palmer, of New Brunswick.

DR. MERRITT—I nominate for President Dr. J. W. Scarborough, of Lambertville.

On motion, the nominations were closed. Drs. Hubbard and Pierce were appointed tellers.

The tellers having reported that Dr. Palmer had received a majority of votes, the President declared Dr. Palmer elected President of the Society for the ensuing year.

The election of a Vice-President was then taken up.

DR. LEVY nominated Dr. E. H. Bunting, Sr., and DR. MCNAUGHTON nominated Dr. J. W. Scarborough.

On motion of DR. HANKS, the nominations were closed.

The tellers reported that Dr. E. H. Bunting had received a majority of votes, and he was declared elected to the office of Vice-President of the Society.

DR. BUNTING—I have been a member of the Society since its organization, and I consider it quite a compliment to be elected its Vice-President. I thank you, gentlemen, for the honor you have conferred upon me.

On motion, the Society proceeded to the election of a Secretary for the ensuing year.

DR. CHARLES A. MEEKER was nominated for Secretary.

On motion, the nominations were closed.

On motion of DR. CLARKE, the President was authorized to cast the ballot of the Society in favor of the gentleman nominated.

The President announced that Dr. Meeker was elected Secretary of the Society, unanimously.

On motion of DR. OSMUN, the election of a Treasurer was taken up.

DR. BUNTING—I take great pleasure in renominating our present worthy Treasurer, Dr. George C. Brown.

On motion, the nominations were closed.

On motion of DR. LEVY, the Secretary was authorized to cast the ballot of the Society in favor of Dr. Brown.

The President declared Dr. G. C. Brown duly elected Treasurer of the Society.

A motion to proceed to the election of a Board of Examiners prevailed, and the following nominations were made: Drs. F. A. Levy, C. W. Meloney, J. C. Clarke, J. Hayhurst, F. C. Barlow, H. A. Hull, S. C. G. Watkins, J. W. Scarborough and J. A. Osmun.

On motion, the nominations were closed.

On motion of DR. LEVY, the rule requiring the presence of a member when the vote on his election is taken was suspended, in order that Dr. Hayhurst, who was absent because of illness, might be voted for.

The tellers having made their report, the President declared that the following named gentlemen had, in their order, received the highest number of votes cast, and were duly elected a Board of Examiners for the ensuing year, viz.: C. W. Meloney, F. C. Barlow, F. A. Levy, J. Hayhurst and J. C. Clarke.

On motion, the Convention went into the election of an Executive Committee.

DR. HUBBARD, having to leave the Convention, was excused, and Dr. Clarke was appointed teller in his place.

The following nominations were made: Drs. G. Carleton Brown, J. A. Osmun, C. S. W. Baldwin, R. M. Sanger, Geo. E. Adams, S. C. G. Watkins, W. Price Richards, C. A. Timmie, Howard E. Roberts and J. M. Vandewater.

On motion, the nominations were closed.

The tellers having made their report, the President announced that the following named gentlemen, having received the highest number of votes cast, were duly elected an Executive Committee for the ensuing year: G. Carleton Brown, W. Price Richards, C. A. Timmie, J. Allen Osmun and Howard E. Roberts.

DR. ROBERTS moved to adjourn and the motion was seconded.

DR. E. F. HANKS stated that there was a Committeee on Registration to be elected.

DR. ROBERTS withdrew his motion to adjourn.

DR CLARKE—I would like to know of what use this Committee on Registration is; what is the object of it? We have the registration list made up, and I would like to know what is the object of continuing the committee.

DR. MCNAUGHTON—I rise to a point of order. The discussion is entirely out of order. We are here for the purpose of electing officers, and the Registration Committee are officers, just as much as the Executive Committee, or any others.

DR. LEVY—I rise to a point of order. There is a motion before the house to adjourn.

DR. CLARKE—I rise to a point of privilege. I hold that any member of this Convention has the right to ask for information, and

I asked for information. In all parliamentary bodies any member has that right.

DR. LEVY—There was a motion to adjourn, and it was seconded.

DR. MCNAUGHTON—My point of order comes in first and has to be settled first.

PRESIDENT BARLOW—I heard no motion seconded to adjourn.

DR. WALLACE—I move that we go into the election of a Board of Registration.

DR. MCNAUGHTON—I call for a decision on my point of order. It is that the election of this Registration Committee is in order now, and must proceed.

PRESIDENT BARLOW—I did not hear any nominations made. There is no motion regularly before the house.

DR. SANGER made a motion to adjourn.

DR. MCNAUGHTON—I call for a decision on my point of order, that the regular order of business now is the election of officers and the election of a Registration Committee.

DR. CLARKE—I rise to a point of order. A motion to adjourn is always in order, and such a motion is now before the house.

DR. MCNAUGHTON—My point of order is not decided yet, that the election of this committee is the regular order of business now.

DR. CLARKE—Nobody has disputed it; but a motion to adjourn is in order at any time.

THE PRESIDENT—A motion was made that we now adjourn, and that motion was seconded by Dr. Roberts.

DR. MELONEY—A motion was made that we go into the election of a Registration Committee.

THE PRESIDENT—A motion to adjourn is now before the house.

DR. WATKINS—Dr. Wallace made a motion that we go into the election of a Board of Registration, and I seconded it, before Dr. Sanger made his motion.

THE PRESIDENT—There is but one motion before the house, and that is to adjourn. All those in favor of the question will signify it by saying aye.

DR. MCNAUGHTON—I call for the ayes and noes.

THE PRESIDENT—All those in favor of adjourning will rise.

DR. MCNAUGHTON—I called for the ayes and noes. I don't want a rising vote, unless it is taken on paper.

DR. CLARKE—I second the call for the ayes and noes; I want it on the record who makes this trouble every year over the election of officers. Heretofore we have had trouble in relation to the election of officers, by some who came late, complaining that advantage was taken by proceeding with the election of officers too early in the session, when there was not a sufficient number of members present. This year we fixed a certain time for the election, and still we have trouble.

DR. PALMER—Dr. Wallace made a motion to proceed with the election of a Registration Committee, and it was seconded by Dr. Watkins before Dr. Sanger made his motion to adjourn.

DR. CLARKE—A motion to adjourn is always in order and takes precedence of all other motions; and a motion to adjourn was the last motion made. It is always in order.

DR. WATKINS—We are here for the election of officers, and everybody knows we are here for the election of officers. It was set down for this hour.

DR. HULL—As I understand it, this body is privileged to adjourn at any time and continue their business to a time set by the chair. We do not adjourn over to next year, but until to-morrow. There is no reason why we should not stop in the middle of the election of officers and adjourn to another day, as well as when transacting any other business.

DR. WATKINS—I think that before another motion is put, the first motion made must be disposed of. Dr. Sanger made a motion that has never been put. Then some one else makes a motion. That motion to proceed with the election of a Registration Committee has precedence, I think, unless some other motion was before it.

DR. PALMER—A question of information; is that allowable?

THE PRESIDENT—No, I don't think it is.

DR. PALMER—Then I will sit down.

THE PRESIDENT—The Secretary will call the ayes and noes on this question of adjourning.

The Secretary called the ayes and noes, and the President declared the Convention adjourned to 10 o'clock A. M. Thursday.

## SECOND DAY'S SESSION.

LONG BRANCH, July 20, 1882.

The Convention was called to order at 10 o'clock by the President. The Secretary called the roll.

Application for membership was received from H. B. Van Doran, of Red Bank—endorsed by Drs. C. A. Meeker and Geo. C. Brown.

On motion, the application was referred to the Examining Board.

Reports of special committees being called for, Dr. G. Carleton Brown, of the Special Committee on Revision of the Constitution and By-laws, presented and read their report:*

DR. MCNAUGHTON—I move that the report be accepted, and that we proceed to consider it by sections.

Carried.

The first article of the Constitution was read and, on motion, was adopted.

Article II of the Constitution was read, and its adoption moved.

DR. MCNAUGHTON—I move that the article be amended by inserting the words *material advancement* between the words "intercourse" and "and," in the last line, so as to read as follows: "and promote among them mutual improvement, social intercourse, material advancement and good will."

* The new Constitution and By-laws, as adopted at this session, was distributed at the session of July, 1883. For the convenience of members, the Secretary, after mature consideration, has considered it best to print the following discussions for the information of the members.

DR. OSMUN—I think the substance of that amendment is implied in the words "mutual improvement," and I do not see any necessity for inserting the proposed words.

DR. MCNAUGHTON—The reason I offer this amendment is that last year, in the American Dental Association, it was put forward by the now President of the Association that the society was not for purposes of material advancement and had nothing to do with ordinary business, but was a scientific body, pure and simple. Now, I am rather in favor of promoting each other's material and financial good in a society of this kind, if we can do so; and that is my reason for having those words inserted—so there shall be no misunderstanding about it.

The question on the adoption of the original motion was put, and declared lost.

DR. D. C. MCNAUGHTON called for a division.

DR. LEVY suggested that the amendment should be voted upon first.

DR. MARSH said he thought he was voting on the amendment.

DR. WATKINS was of opinion that the article as amended should be voted upon.

DR. SCARBOROUGH said that evidently the question was not understood; that he himself, when the vote was taken, was in doubt whether it was upon the original resolution, the amendment, or the amended resolution, and he suggested that it be read again.

The article as amended was read.

DR. MCNAUGHTON—I move the adoption of the amendment.

DR. CLARKE—As I understand it, the vote is first taken upon the section as amended, and if that is voted down, then the vote is taken upon the original section as reported by the committee.

DR. SCARBOROUGH—I am always of opinion that it is better to expunge any unnecessary language from a document, especially from a carefully drawn document, as this should be, being a part of our Constitution and By-Laws; and I cannot, for the life of me, see any material difference in the sense of the words of the amendment from those of the original article. I think mutual improvement does certainly embody and include material advancement, and if that is so, why should we add those superfluous words? It seems to me that if we are mutually improved, we are materially advanced.

The question was put on the adoption of the amendment, and a *viva voce* vote being taken, it was declared lost.

DR. MCNAUGHTON—I call for a division—simply a rising vote.

A rising vote was taken, and the President announced that the amendment was lost.

The question on the adoption of the original article as reported by the committee was then put, and the article adopted.

Article III was then read by the chairman of the committee, Dr. G. Carleton Brown, and its adoption moved by Dr. Clarke.

DR. MCNAUGHTON—I hope that motion will not prevail, as the article has not been properly read.

DR. CLARKE—I rise to a point of order; there is no question before the house for discussion.

DR. MCNAUGHTON—The original rule was not properly read—the old article.

DR. G. CARLETON BROWN—It is a new article that we offer, and it is properly read. We are not reading the old article.

DR. CLARKE—I rise to a point of order, that there is no question before the house for discussion. You cannot discuss a subject until it is stated, nor a motion until it is seconded.

DR. SCARBOROUGH—I second the motion of Dr. Clarke, to adopt the section, if I understood him to make that motion.

DR. CLARKE—As the motion has been seconded by Dr. Scarborough, it is now open for debate. My motion was that the section be adopted as read.

DR. OSMUN—As I understand the section, the Executive Committee is to consist of four members. I object to that for the simple reason that no committee ought to be composed of even numbers. The next section partly overcomes that objection, by making the Vice-President the chairman of the Executive Committee and, of course, a member of it. It is all right then, so long as the President and the Vice-President occupy their respective positions. But suppose the President is called away by sickness or any other cause, and the Vice-President is called to the chair; a member of the Executive Committee then takes the Vice-President's place as chairman, making an even numbered Executive Committee. Then a question comes up on which the members of that committee are equally divided, two and two. I should like to ask who is to cast the deciding vote. On that ground I object to it.

DR. CLARKE—Where does the Constitution state, if the President shall be absent, the Vice-President becomes President.

DR. OSMUN—Does not the Vice-President always take the chair in the absence of the President?

DR. CLARKE—He does nothing more than occupy the chair; he does not become President of the Society nor lose his office of Vice-President. You cannot make him President.

DR. OSMUN—He occupies the chair.

DR. CARLETON BROWN—The Vice-President of the United States is also President of the Senate, and has duties to perform like those of the Speaker of the House of Representatives, and so we have here given the Vice-President some work to do. The Vice-President of this Society has heretofore been merely a figure-head, with nothing to do; it has been an office in name, and nothing else. I think we have a full corps of officers left, if we do drop off one. As Dr. Clarke has explained, the Vice-President does not become President, and therefore does not lose his position as chairman of the Executive Committee.

DR. OSMUN—When the Vice-President, being chairman of the Executive Committee, is acting as President or chairman of the Society, and the Executive Committee is called upon for a report, who is to make the report? Is the Vice-President to report to himself? There must be a chairman of the Executive Committee. I would rather have it consist of three members than five.

DR. CLARKE—I do not see any difficulty; the Executive Commit-

tee have stated meetings, and if the Vice-President should happen to be called to the chair, he could make the report of that committee, or else they could select one of their members to make the report.

DR. MCNAUGHTON—I move that the article be allowed to stand as it now is.

DR. MELONEY—There is a question before the house.

DR. MCNAUGHTON—I move an amendment that the article be allowed to stand as it now is—according to the Constitution as it now is.

DR. CLARKE—I move that the amendment be indefinitely postponed.

The President announced the last motion carried.

DR. MCNAUGHTON—I call for a division on that. I do not think it is carried.

DR. CLARKE—I rise for a question of information. After the vote has been announced by the chair, has a member the right to call for a division? Does he not have to call for a division before the vote is announced.

THE PRESIDENT—Dr. Clarke is right.

DR. CLARKE—I call for my original motion.

DR. MCNAUGHTON—I move to amend by inserting between the words "members" and "and" these words: *a Committee on Registration, to consist of five members,* this clause to be inserted before the words, "and such other officers as may be designated by the By-laws."

DR. CLARKE—That amendment not being seconded, I call for my original motion.

DR. MCNAUGHTON—I rise to a point of order. The motion has been seconded.

DR. CLARKE—I move that it be indefinitely postponed.

DR. MCNAUGHTON—The gentleman has asked for some information in regard to the Registration Committee—of what use it is, and so on. I have also heard that it is a very expensive committee. If it is in order now, I would like to explain what the committee has done, its cost, and what it may yet do.

DR. BROWN—Is this discussion in order at this time?

THE PRESIDENT—I think not.

DR. MCNAUGHTON—Is that your ruling, Mr. President, that discussion is not in order on this question?

THE PRESIDENT—I rule that on this point discussion is out of order.

DR. MCNAUGHTON—May I ask the reason why?

THE PRESIDENT—Because it was indefinitely postponed. There is a proposition before the house to abolish this committee.

DR. MCNAUGHTON—Discussion is out of order, is it? Or is it only out of order when it comes from me? Discussion is out of order?

THE PRESIDENT—Yes, sir.

DR. OSMUN—Can it be in order to indefinitely blot out the Committee on Registration? There is nothing in this section about continuing the Registration Committee.

DR. CLARKE—An amendment was offered by Dr. McNaughton

which provided for a Registration Committee, and I moved the indefinite postponement of that amendment. He offered an amendment to the new section, adding a Registration Committee, and I moved the indefinite postponement of the amendment.

DR. MCNAUGHTON—And the President declares discussion upon it out of order, yet allows it to go on.

DR. BALDWIN—How can we postpone the amendment before it has been carried? How can you postpone something not here?

DR. CLARKE—What would you postpone after the thing has been carried?

DR. MCNAUGHTON—I want to know why this discussion is going on. I do not care about the Registration Committee, but this only shows the spirit of this Society. It is a small matter in itself, but it shows the personal feeling against me.

DR. BALDWIN—I call for the question on the postponement—the postponement of the whole discussion on this thing.

DR. CLARKE—My motion was to postpone the amendment.

THE PRESIDENT—The question is on the postponement of the amendment.

DR. MCNAUGHTON—Discussion is out of order on this, is it?

DR. HANKS—I call for the question on the indefinite postponement of that amendment.

DR. MCNAUGHTON—If that is your decision, I wish to appeal from it.

THE PRESIDENT—The question is on the postponement of the amendment establishing the Registration Committee.

DR. MCNAUGHTON—I appeal from the decision of the chair.

DR. WATKINS—When a question is called for it is always discussable.

DR. MCNAUGHTON—I appeal from the decision of the chair, and I trust my appeal will be put.

DR. OSMUN—I am trying to find out what the discussion and all this is about. I will make one more motion, which is, that all this be laid on the table, and we start over again.

The motion was seconded.

DR. MARSH—My idea would be to vote upon the amendment offered by Dr. McNaughton, and that would settle the question of postponement made by Dr. Clarke.

DR. MCNAUGHTON—I trust my appeal will be put.

DR. OSMUN—It has been moved and seconded that all these previous resolutions and amendments be laid on the table, and I call for a vote on that.

DR. MCNAUGHTON—Notwithstanding that my appeal is in order.

DR. OSMUN—Dr. McNaughton's resolution was not seconded or voted on at all.

DR. CLARKE—Dr. Watkins seconded his motion.

DR. SCARBOROUGH—The chair has decided that discussion on that point is out of order; Dr. McNaughton has appealed from that decision, and wants his appeal put, and I think it is but just that it should be.

DR. G. C. BROWN—Dr. Osmun's motion was clearly in order, which was to lay the question on the table. That motion is not debatable.

DR. MCNAUGHTON—My appeal is directly in order, and I insist upon it that it shall be put.

DR. MEEKER—If Dr. Osmun's motion is put before the house, Dr. McNaughton will still have the privilege of appeal when it comes up in new shape again.

DR. OSMUN—I call for the question on my resolution, that all this matter be laid on the table and we start in fresh again.

DR. MCNAUGHTON—It is queer, indeed. The President has shut off discussion.

DR. OSMUN—There has been considerable of it, I notice; if it has been shut off, it must have leaked.

DR. MCNAUGHTON—I simply appeal from the decision of the chair, that there shall be no discussion.

DR. OSMUN'S motion, to lay the whole matter upon the table, was then put and carried.

Article IIII was again read.

DR. OSMUN—I move an amendment, that the word *five* be inserted in place of the word "four."

DR. ROBERTS—I would like our Vice-President to have something to do. He is merely an honorary member now.

The question on the amendment was put and lost.

DR. MCNAUGHTON—I move that the words, *a Committee on Registration, to consist of five members,* be inserted between the words "members" and "and," in the fifth line of the old article.

Seconded.

DR. OSMUN—I would like to ask for information, what good is the Registration Committee. Will Dr. McNaughton explain what is its use, what they hope to accomplish, and what has been accomplished.

DR. MCNAUGHTON—The idea of the Registration Committee was originally to get a thorough, good list of the dentists practicing throughout the United States, in order to make a thorough organization among the dentists of the United States, and to protect themselves from such organizations as the Goodyear Dental Vulcanite Company and like combinations, which bore too heavily on the dentists. Only recently, within a year, the dental goods dealers have formed a combination against the dentists. I do not believe there is a member here but will agree with me that the action taken by this Society two or three years ago has reduced the prices of dental goods very materially. If the Registration Committee cost one hundred dollars a year to this Society, it would be cheap to the members of the Society and the dentists in this State. It has been a positive and material good. Another material advantage of the Registration Committee is that it assists the Board of Examiners. The Board of Examiners are not doing their work properly, and I do not believe they can do it properly.

DR. HANKS—I call the gentleman to order. He is on the Registration Committee now.

DR. MCNAUGHTON—There are in Hudson county to-day, dentists practicing that the Board of Examiners do not know of. This is an astonishing fact, but it is true. There are dentists practicing all through the State that the Board of Examiners know nothing at all about. These dentists are moving around through the State, and the Board of Examiners cannot keep track of them. The law is becoming a dead letter simply because the Board of Examiners cannot keep a perfect record of all these men. They have not done it, and they cannot do it. This Registration Committee is of more positive value than anything else in the Society, that I know of. At the same time, I do not care one straw about it personally; I only fight for the right.

THE PRESIDENT—The question is on the amendment offered by Dr. McNaughton.

DR. MCNAUGHTON—I call for a division.

THE PRESIDENT—There has been no vote on the amendment yet.

DR. MCNAUGHTON—I call for a rising vote.

THE PRESIDENT—You cannot do it until there has been a vote on the question.

DR. MCNAUGHTON—Then, if you will permit me, just before the question is decided, I will call for a rising vote. It is necessary to be a little previous here.

Dr. OSMUN—You allow no discussion? Only one question.

THE PRESIDENT—No, sir.

DR. MCNAUGHTON—If the question is for me, I would like to answer it.

DR. MARSH—May I ask for information before the vote is taken; is any provision made in the By-Laws for this Registration Committee?

THE PRESIDENT—Not in the original By-Laws.

DR. MARSH—It has got to be inserted here or not at all?

THE PRESIDENT—Yes, sir; here, or not at all.

DR. OSMUN—I think we ought to have full and free discussion of this question before it is put to vote; otherwise it will only have to be opened again. As I understand it, if we vote on this amendment in the affirmative, then there will be a Registration Committee hereafter, and if we vote in the negative, there is to be no more Registration Committee at all; am I correct?

THE PRESIDENT—That is as I understand it.

DR. OSMUN—I do not think it is wise to act hastily in this matter. The Registration Committee was created some two or three years ago to accomplish certain results, and if they are doing what they are said to be doing, if they are trying to prosecute the men who are infringing the law, then, I say let them keep it up. The committee makes, of course, a few more officers, but there is but little expense attending this committee, and if they bring to our notice the men who are traveling from place to place and practicing illegally—a work which the Examining Board cannot do, and which the Prosecutor cannot do—he never has done it, though appointed for that purpose—then and therefore, I am in favor of continuing the Registration Committee.

DR. SCARBOROUGH—I would like to ask what the reason for expunging that committee was.

DR. CARLETON BROWN—It was never provided for in the By-Laws.

DR. MCNAUGHTON—It is in the Constitution. I call upon the Secretary to read it.

DR. MEEKER—I will state that I had the stenographer's report of the proceedings in my room last night, and it disappeared very mysteriously. If any one here has it, I will read from it; if not I will read from my minutes.

DR. GEO. C. BROWN—As I understand it, the Registration Committee—and I was one of the original members of it—was appointed by a simple resolution of this Society, and I have no recollection that there has been an amendment to the Constitution, either proposed or adopted, that made that committee a part of the Constitution of this Society. If such is the fact, it has escaped my knowledge.

The Secretary read from his minutes the amendment creating a Registration Committee.

DR. GEO. C. BROWN—When was that offered, Mr. Secretary.

DR. MEEKER—In 1879.

DR. GEO. C. BROWN—Was it adopted as part of the Constitution?

DR. MEEKER—It was so adopted.

DR. GEO. C. BROWN—Not at the same meeting, as a matter of course?

DR. MEEKER—No; it was offered on the 16th and adopted on the 17th of July.

DR. GEO. C. BROWN—At the same session?

DR. MEEKER—The same session.

DR. GEO. C. BROWN—Can we change our Constitution at the same session? Not exactly. I think the amendment had to lie over to the next year.

DR. MCNAUGHTON—That was the ruling at that time, and numerous amendments were made in that way, being offered one day and acted on the next.

DR. WATKINS—Mr. President, I would like to have you ask Dr. McNaughton, if you please, what expense this Registration Committee has been to this Society.

DR. MCNAUGHTON—I am very happy to inform the gentleman that the expense so far has been something less, I think, than ten dollars. A few years ago the Society voted that they should be at an expense of less than twenty-five dollars annually, but none of that was ever called for by the committee. I did ask the Treasurer of the Society, last year, if he would pay the expense of printing the directory of dentists, and he said he would not, on account of an article in section 4 of the By-Laws, in relation to the duties of the Treasurer, which would prevent him from paying it. The Society, I think, has paid less than ten dollars on account of this committee's expenses. I may be mistaken, but it is certainly a very small amount that the Society has paid so far for the work of the committee.

DR. GEO. C. BROWN—Allow me to read a letter which I received from the gentleman, as I am called in question as refusing to pay his demands.

Dr. Brown read as follows:

JERSEY CITY, March 4, 1882.

*Dr. G. Carleton Brown:*

DEAR SIR—Will you please send me a list of the officers of the Central Dental Association of Northern New Jersey; or a new letter-head will answer. And will you please oblige me by asking your father if he will honor a draft for twenty-five dollars against the State Society, for printing new directory of dentists. I do not feel like going on with the work without some backing.

Yours truly, D. C. McNAUGHTON.

DR. BROWN—I immediately answered him and referred him to article one, section four, of the By-Laws, which prescribes the manner in which the funds of this Society shall be paid out, and I told him that if he would send the bill to me, properly endorsed by the President and Secretary, I would pay the money. I saw the gentleman subsequently, and he said it was too much trouble and he would not do it. If there is any objection to my action in the matter, I would like to know on what grounds.

DR. MCNAUGHTON—There is no objection to it.

DR. BROWN—I will not pay any money out of the funds of this Society without a proper voucher.

DR. MCNAUGHTON—It is simply a question of opinion. The action of the Society itself should be a proper voucher.

DR. BROWN—That article defining the duties of the Treasurer is what the Treasurer has to be guided by. The Society cannot get any money out of the treasury unless it comes out in proper form, so long as I am its Treasurer.

DR. SCARBOROUGH—I do not understand that Dr. McNaughton takes exception to Dr. Brown's action at all; he only states what money has been paid out. I do not think there is any cause for controversy between you two gentlemen at all.

DR. BUNTING—I would like to ask if there was not, last year, a resolution passed that Dr. Welch was to pay twenty-five dollars to the Society or the committee, for the list of these names. Did he agree to do that?

DR. MCNAUGHTON—Certainly; that is one of the ways in which the Registration Committee pays for itself. In exchange for these New Jersey lists I get other lists; I suppose that don't belong to me. I was at considerable expense in getting these lists of dentists throughout the United States copied. But that has nothing to do with the New Jersey lists, and I simply asked that the Society permit me to receive a certain amount from Dr. Welch for a very valuable consideration. These lists came to me, and were copied at considerable expense to me. The copying was my own business, was it not? it certainly was not this Society's business; the Society did not agree to copy all those lists from the different States, did they?

DR. G. CARLETON BROWN—I would ask if there was not a resolution passed that Dr. McNaughton was to be allowed to charge two cents a name for this list of dentists, to all who desired to purchase a copy of them. From the number of dental depots that have sprung up through the country, I should suppose that quite a revenue might have been derived from that source. Dr. Scarborough wants to know why we left out this committee. I will say that, in the first place, we did not know they were officers. We looked through the minutes to find what amendments had been made, and we did not find the amendment creating this committee, but afterward we found it. This registration is Dr. McNaughton's hobby; he thinks it is a big thing; the rest of us do not. He says it protects us from dental dealers. We do not see how it protects us. I would like to ask the Secretary how many the Examining Board has been able to prosecute through the agency of the Registration Committee for violating the law. These lists from different States Dr. McNaughton undertook, under the auspices of the American Dental Association, year before last, and they gave him some privileges in the matter. Last year it was brought up again, and a gentleman got up and declared that it was not for material advancement, that the American Dental Association was not a mercantile firm, and did not propose to go into the business of picking up names for dental dealers; and the whole business was laid on the table indefinitely. These lists from the other States we have nothing to do with. I think we need somebody to look after the other dentists, who may be practicing illegally, but I do not think the Registration Committee is the proper one to do it. I think it should be a committee in each county. The Registration Committee does not cover the ground.

DR. CLARKE—In reference to those who are starting in practice, there is a law in effect now, that no one can commence to practice in any town unless he is registered in the County Clerk's office. And so far as the Board of Examiners is concerned, there is nothing in the law that makes it their business to go through the different counties and ascertain who is practicing illegally. If any one commences to practice in a town, the members of this Society in his vicinity should report the fact to the Secretary or Prosecutor, with such information as they can obtain regarding his right to practice; then it is the duty of the Prosecutor to take the matter in charge.

DR. MEEKER—Some two years ago the Secretary was authorized to appoint one member of this Society, residing in the county seat of each county in the State, to go to the County Clerk's office and take the names of all dentists who had registered and who were practicing legally. Under that authority I appointed a number of gentlemen as such special committee.

DR. MCNAUGHTON—How many reported under that appointment?

DR. MEEKER—Nearly all of them made reports.

DR. G. C. BROWN—As the Examining Board has been called to account, and as I was a member of that board a few years ago, I would like to ask Dr. McNaughton what information he ever fur-

nished the Examining Board in relation to members of the dental profession practicing illegally in the State of New Jersey. If he ever furnished any such information I have failed to hear of it.

DR. MCNAUGHTON—I gave the chairman of the Examining Board, at one time, a list of all the graduates of colleges, nearly, in the United States, and I gave the chairman of your committee, at one time, a copy of the lists I had published, with very valuable information attached to nearly half of the names. I thought it was not my business to keep that record, I thought he should have it, and I think he has it still. It was most valuable information, that took me a long time to collect.

DR. GEO. C. BROWN—Were you positive that these men were practicing illegally?

DR. MCNAUGHTON—No; but if you get at the number who are practicing legally, you can easily get at the illegal practitioners.

DR. GEO. C. BROWN—I claim that the Examining Board, for the last five or six years, and up to the present year, have attended to every case that has been brought to their knowledge, by the Secretary or others, of gentlemen practicing illegally. In one or two instances the matter has been brought to a legal issue; in one or two cases it was found that the evidence was not sufficient to warrant us in going on with the prosecution, or the parties moved out of the State, or something happened to prevent further action. The Examining Board has never shirked its duty in any shape or form, and when Dr. McNaughton gets up and impugns the integrity of the members of that Board, and says they have not done their duty, he is going a little too far, in my judgment.

DR. MCNAUGHTON—There are men practicing illegally in Hudson county to-day.

DR. BROWN—How long does the law give a man in which to register?

DR. OSMUN—Thirty days.

DR. GEO. C. BROWN—I would like to ask whether Dr. McNaughton has ever reported these men to the Examining Board.

DR. MCNAUGHTON—I intended to report them in my report, but somehow it has been left out.

DR. GEO. C. BROWN—I would like to ask Dr. Meloney, the present chairman of the Examining Board, whether that Board has had presented to it any communication from Dr. McNaughton giving information regarding persons practicing illegally.

DR. MELONEY—No.

DR. MCNAUGHTON—I certainly have given them information in the way I stated.

DR. CLARKE—Have you not got graduates of colleges down as practicing illegally?

DR. MCNAUGHTON—That was supplemented. As far as possible, I noted over their names whether the person was a graduate of a college, what year graduated, and whether he commenced practicing prior to the passage of the act.

DR. WALLACE—I do not think there is any dereliction of duty on the part of the Examining Board, but I think the whole matter lies

with the Prosecutor. I have forwarded from Camden the names of three or four dentists who were practicing illegally; we have one practicing now illegally in Camden.

DR. CLARKE—It is not the business of the Examining Board to do that.

DR. MCNAUGHTON—Then make a committee that will have the business to do.

DR. GEO. C. BROWN—Complaints have been sent to the Examining Board that certain men were practicing illegally, but when we asked for the evidence of the gentleman making the complaint, he says: "I would rather you would get the evidence from somebody else; I do not wish to be mixed up in this matter; he is a neighbor and friend of mine, and I don't want anything to do with it; you must hunt up your evidence." Now, I do not think it is the duty of the Examining Board to go hunting over the State for evidence of illegal practicing. If members who are cognizant of the facts will send the evidence to the Board or Prosecutor, or be ready to produce it before a Grand Jury, then the Board will look after the young men, but they are not going to hunt around for evidence themselves; at least I do not think they are, unless they have changed a great deal from what they were when I was a member of the Board.

DR. MEEKER—I think the Secretary has gained all the evidence necessary; I think I have all the names and can name the ones Dr. McNaughton speaks of.

DR. HANKS—I submit that we are wasting a great deal of time. I think we have given the gentleman plenty of rope, enough to hang himself several times.

DR. WATKINS—Dr. Meeker says he invited, or appointed, a member in each county to look after and secure the names of dentists registered in the County Clerks' offices, and he named Dr. Heath, of Hackensack, as one so appointed. I went to Hackensack myself in regard to the matter, and I found that the County Clerk was unaware that there was any such law in existence, and he had no book in which to register the names.

DR. MEEKER—If Dr. Carman is here, I would like him to state whether he is registered or not. Dr. Carman sent me his name as having registered, and Dr. Heath sent me Dr. Carman's and Dr. Hedges' names as registered in the County Clerk's office.

DR. CARMAN, of Englewood, Bergen county, said he had registered at the County Clerk's office at Hackensack; likewise Dr. Heath and Dr. Hedges, practicing at Hackensack.

DR. WATKINS—The County Clerk was not aware that there was any law of that kind in 1879.

DR. MEEKER—It is proper to say that we have to teach the County Clerks what to do, especially when a new one is elected, as is the case there.

DR. WATKINS—The County Clerk at Paterson was also unaware there was such a law; I had to show it to him, and I gave him a book to register the names in.

DR. R. V. JENKS—I am surprised to hear that the County Clerk

at Paterson was unaware of the law, because I took him a copy of it myself, and showed him my credentials that I had along with me to get the list of names, and I was registered at the same time.

Dr. Watkins—I was there this last Spring; I think it was in February.

Dr. McNaughton—The fact is that some committee should take this thing in charge. There is no use of trying to get around it because I am unpopular. Whenever a new County Clerk is elected, he should be sent a copy of the law, and whenever a new dentist is registered, or commences to practice without registering, there should be some committee to look after his credentials.

Dr. Jenks—Our old County Clerk did make a list of the names. He gave me a list of the names registered, and I have taken it upon myself to look after the dentists who have started in practice lately, and I have been the means of three having to go to college—Moore, Davenport and Healy. Moore was practicing dentistry all the time he was in college.

Dr. Osmun—Is it not against parliamentary usage for a member to speak more than three times on one question without special permission?

Dr. Clarke—I do not think there is anything in the By-laws as to how many times a man shall speak.

Dr. Baldwin—I have not spoken before, so I can claim the privilege. It is evident that there are a good many difficulties connected with the work of this committee. It is a very difficult matter, even for a committee appointed specially for the purpose, to get these names. I have had the names of dentists sent to me who would not pay any attention to us when we asked them for their address by special letter. Of course, those who have not the legal right to practice are very careful about giving their names. I do not think the Examining Board can be blamed a particle; I do not think it is their business; I think we must have a special committee for that purpose if we expect to do the work in a matter that meets with so much difficulty as this has. If we have got a dental law it ought to be enforced. Members do not want to oppose their friends and neighbors, and you must have a special committee to do that work. I do not think it is the business of the Executive Committee, or of the Board of Examiners; it needs a special committee. The present committee have met with a great many difficulties, which cannot be overcome in one or two or three years, and no committee is doing better work than they are. In reference to dental goods, I think it is for the benefit of dental dealers to have this committee. We do not do the work for them especially, but when we can help them and ourselves at the same time, I say do it. And I have received many communications and circulars from dental dealers, simply from their getting my address from these lists, and I have had better opportunities for buying goods than I would have had if this Registry Committee had not made these lists of names and circulated them among dealers.

Dr. G. Carleton Brown—I think what we are getting now is correct and practical. What we want is a Prosecutor, assisted by a

committee. We want the Secretary as Prosecutor, assisted by a committee in each county.

The question on the adoption of Dr. McNaughton's amendment was put and rejected. Dr. McNaughton called for a division. A rising vote was had, with the same result.

On motion of Dr. CLARKE, the section—Article III—as reported by the committee, was adopted.

Article IV was read, and its adoption moved.

Dr. BUNTING—It seems to me injurious that any dentist can come from another State and open an office and practice in New Jersey and not reside there. The section does not cover the ground at all.

Dr. CARLETON BROWN—Suppose a man resides in New Jersey and practices in New York; he could not belong to the New Jersey Society, and he could not belong to the New York Society, if you compel a man to live where he practices. I think a man's business is where he practices, not where he lives.

Dr. HANKS—I do not think we have anything to do do with where a man lives.

Dr. WATKINS—I think that pretty nearly one-quarter of the dentists practicing in New York city live elsewhere; a large number of them live in New Jersey, and I do not think they have any right to be active members of our Society. I think a man's professional home is where he practices, not where he lives.

The question on the adoption of the section as read was put, and the section was adopted.

Article V was read and, on motion, adopted.

Article VI was read and its adoption moved.

Dr. MCNAUGHTON—I would like to have explained what is meant by the word "meeting"; whether it is a session, or whether an amendment can be offered to-day and acted upon to-morrow.

Dr. OSMUN—I move that the section be amended by inserting the word *annual* in the last line, so as to read, "the next annual meeting."

Dr. CLARKE—The only objection I have to that is that it lays over the amendment for a year, and the gentlemen who are here to-day, when it is offered, may not be here next year to take action upon it, and the gentlemen who will be present next year, when it comes up for adoption, may not have been here when it was offered; consequently nobody knows anything about it. I think an amendment can be acted upon more intelligently, if it is offered and acted upon at the same annual meeting, being laid over for one day before it can be adopted.

Dr. G. CARLETON BROWN—We wanted to draw an issue on that point; we have not any rule as to what is a session or a meeting, and we wanted the point to be settled, whether we can present an amendment one day and have it acted on the next, or whether it must be laid over for a year.

Dr. OSMUN—I withdraw my amendment.

Dr. CLARKE—If the proposed amendment were in force, it would

be easy enough to get over it; all you would have to do would be to suspend it for a day.

Dr. Watkins—The law provides that the Society shall have its regular annual meetings, and I suppose this is one of the meetings, there being a number of sessions in one meeting. We can have as many sessions in that one meeting as we like. I move that the section be amended by substituting the word *session* for the word "meeting."

The section was read as amended.

Dr. McNaughton—I call your attention to the fact that according to the printed programme, this is the twelfth annual *session*.

Dr. Meeker—In preparing the programme, I have been following precedent in that respect for twelve years.

Dr. Scarborough—I think there is a misapprehension of the meaning of the words. A meeting may have many sessions. A session should, I think, mean a part of one meeting; therefore I think the word *session* is the more appropriate word to be used here, if you do not want amendments to lie over from one meeting to another.

The motion to amend was then put and carried. The section, as amended, was then, on motion, adopted.

The By-Laws reported by the special committee were then taken up. The first and second sections of Article I were read and adopted.

Section 3 was read.

Dr. Brown offered an amendment, making the Secretary the official prosecutor of the Society.

The amendment prevailed, and the section, as amended, was adopted.

Sections 4, 5 and 6 were, on motion, adopted.

Sections 1 and 2, of Article II, were, on motion, adopted.

On motion of Dr. Clarke, the vote on Section 2 was reconsidered.

Dr. Clarke—I think five negative votes are too few. I think it should require two-thirds of the members voting to elect, and no more. Under that rule, five negative votes out of thirty, reject a candidate, and you must have twenty-five out of thirty to elect. There may be, in certain sections, some jealousies and rivalry, and five members might, through such jealousies, reject a man who may be just as good as they are. I do not think it is right to give five members that power.

Dr. Scarborough—I should be perfectly satisfied as it is, because candidates are always referred to the Executive Committee, or the Examining Board, rather; the gentlemen composing that Board are competent men, they consider the application and weigh the testimony, and if there were five members who wanted to exclude an applicant, they could hardly get an adverse report.

Dr. Clarke—The Examining Board take the testimony and report favorably, but when the ballot is taken on the election of the candidate, if five members black ball him, he is rejected; and nobody knows how you vote or who voted against him. It is not the Examining Board that has the power to decide whether he shall be elected

or not. If the section is adopted, it will give the power to five gentlemen to reject a man; if there were forty members present and voting, five would reject him. I think it would be better to make two-thirds necessary to elect; I offer an amendment to that effect.

The question on the adoption of the amendment was put and carried. The section, as amended, was then, on motion, adopted.

Articles III, IV, V and VI were severally adopted.

Article VII was read and its adoption moved.

DR. WALLACE—I would like the time of meeting changed to the 15th of August, at least one month later; I offer that as an amendment.

DR. G. CARLETON BROWN—I would like to know what the reason is for changing it.

DR. WALLACE—It occurred to me that it would suit some members better. A number of my patients do not go away until August for their summer vacation, and it is difficult for me to get away before that month. I have to return this afternoon in order to attend to a patient who wants to go away. And if we are going to meet at Asbury Park, it is near the time of camp-meeting.

The question of the amendment was put and lost. The section as reported by the committee was then adopted.

Article VIII was adopted.

Article IX was read and its adoption moved.

DR. OSMUN inquired where the report of the Executive Committee came in in the order of business, if not made at the opening session.

On motion of DR. CLARKE, the article was amended to read "reports of committees," instead of "reports of special committees," and adopted.

DR. WATKINS—I would like to ask when the election of officers will take place.

DR. OSMUN—I think the time of the election of officers ought to be left to the discretion of the Executive Committee.

DR. CLARKE—I would state that the Executive Committee, in selecting that hour, should consider that we get a reduction of hotel rates, and I hope they will name the time so that it will cover the time of departing trains and boats. Some members came last night just before the evening meeting, and left when the election was over.

DR. OSMUN—I would suggest that the Executive Committee have power to appoint whatever hour they may see fit for the election of officers, and that they change it from year to year. If you set the election for Wednesday night, we will have a big crowd on Wednesday night, and no other time. It ought to be changed, or held in abeyance until the regular meeting, and announced at the previous session, and then you will keep the members here. On Wednesday morning we had hardly enough members present to open a meeting. If the Executive Committee have power in this matter, they can keep the members here until after the election of officers.

DR. MCNAUGHTON—I hope the Executive Committee will so arrange it that the Society will continue to exist and flourish for the benefit of hotel proprietors and dental manufacturers!

Dr. Watkins—I would make a motion that at the first session of the meeting each year the President shall announce to the Society the time when the election will take place, which may be at the second, third or fourth session, as the Executive Committee may agree upon. Then we will all be here, ready and anxious all the time for it.

Dr. Clarke seconded Dr. Watkins' motion, and the amendment was adopted. Article IX, as so amended, was then adopted.

Article X was read and adopted; also Article XI.

Dr. Clarke—I now move that the By-Laws, Constitution, Order of Business and Rules, as amended, be adopted as a whole, to take effect at the next session.

The motion prevailed, and it was so ordered.

Dr. G. Carleton Brown—I move that Article VI of the Constitution, and Section 5 of Article VII of the By-Laws, be suspended for twenty-four hours, in order that we may adopt the amended Constitution and By-Laws at this meeting.

The motion was put and carried.

The Examining Board reported favorably upon the application of H. B. Van Doran, of Red Bank, and that gentleman was duly elected to membership in the Society.

The Secretary presented a proposition from Mr Pach, to photograph the members of the Society in group. The proposition was accepted, half past nine was agreed upon as the hour for that business, and Drs. Levy, Richards and Pierce were appointed a committee to superintend it.

Dr. Osmun, of the Executive Committee, respectfully reported that the trustees of the Chapel demanded twenty-five dollars for its use during the sessions of the Society.

On motion, the report was accepted.

The President not having his paper at hand, Dr. S. G. Wallace, of Camden, read the following paper:

## PREMATURE DECAY AND LOSS OF TEETH.

This is a subject of deep interest to our profession and of vital importance to humanity in general. Although it has had much discussion by the ablest and wisest of the dental and medical profession, we may yet arrive at some conclusions which may be profitable. The oral and nasal cavities may be truly designated as the open avenues to life and health, as well as disease and death, with or without the destructive influences of bacteria; what we eat and what we breathe are both alike reparative or destructive to life and health. The blood is the life-giving principle to animal life or to the human organism. As the sap is dependent on good soil, moisture, light, heat and air for the development of a healthy plant, so is the blood dependent on the phosphates and carbonates of lime, magnesia and salts of potash, assimilated from nutritious food by good digestion and pure air, for the promotion of health and life. It is said "nature repeats itself once in seven years," in the disintegration and

death of all the soft tissues of the human body; also in recuperation and in life, through the various agencies of the assimilative and reparative forces, working in harmony with the human economy; thus showing that "in the midst of life we are in death."

The proverb that every generation will become weaker and wiser, has been demonstrated in the rapid strides that have been made in science, art and mechanism. And that the race is degenerating, none can question. This can be *seen* in the *frailty* of human *nature*, and the premature *decay* and loss of *teeth*. To find the causes is a problem difficult to solve. That the decay and loss is premature, is beyond doubt. How often do we find the deciduous teeth in a state of decomposition, and many of them beyond the possibility of saving, before the six-year molars are erupted; and not *unfrequently* do we find them decayed when fully developed. I have no doubt that in the order of human economy, the deciduous or temporary teeth were designed to serve their purposes without decay until supplanted by the permanent teeth. If the permanent teeth were not designed to last during natural life, would we not have been supplied with two or more sets, as the case might require? But nature has not made this provision; hence the necessity for the dental profesion. In an article on civilization and the decay of the teeth, we find the following: "The progress of caries with civilization is admitted on all hands; the jaw of the Zulu or aboriginal Australian presents no traces of this malady. The teeth may be worn down to the edge of the gum by constant grinding of the unground maize, but no chemical action of the fluids of the mouth is visible. The ravages of fungus growth are not present." The degeneration and early destruction of the wisdom teeth in European skulls, as compared with those of uncivilized tribes or the anthropoid apes, is also an admitted fact. Another curious observation has just been made; Dr. Beddoes and a Mr. Tucket state that "the average British head is undergoing a steady diminution in size, amounting to three quarters of an inch in the last twenty-five years, as shown by the circumferential measurement of hatters."

These facts all seem to show that civilization is tending to a deterioration in the structure and build of the human frame, and nothing leads to this conclusion more clearly than the consideration of the details of the processes by which the teeth are destroyed. (*Independent Practitioner*, January 1882). From the *British Dental Journal:* "It is said by some that intermarriage with other nationalties is the cause of irregularities and decay. In my humble opinion, this has but little to do with it; as a rule, you will find better teeth among the foreign element when they land in this country than are found among natives. In an extended practice among German, Irish and English, to my certain knowledge, I have not inserted twenty-five sets of teeth, nor have I seen half a dozen sets that were made in Europe. In this country, climate, diet, and manner of living have much to do with the rapid destruction of the teeth. I think one of the primary causes of the frailty and crowded condition of our teeth is due to dissipation, irregular habits and early marriage. Begetting and giving birth to children, and a mul-

tiplicity of them, before the parent has arrived to maturity, with impoverished blood, a low state of vitality and constant drain on the system physically and mentally, during pregnancy and nursing, is an injury to the teeth of the mother and destructive to the teeth of the child. I look upon this as the inherited condition of the chalky and irregular teeth that we are brought in contact with in our every-day practice; and it is with this condition of organic matter and the absence of lime that we find in the children's teeth extreme sensitiveness, congestion, inflammation and suppuration, and their ultimate loss. Many of the ailments of this and the generations to come must be accredited to dissipation and early marriage. While you are conversant with many theories advanced as to the cause of caries, you will find the weak tooth more susceptible to chemical action, and it will require more care with the patient and by the dentist to save it, and their constant co-operation if it is saved. While we may have the very best manipulators in filling to save the teeth, it has been proved conclusively that science has measurably found the cause, and that other agencies must be brought to bear to arrest and to prevent decay. It is evident that the prescription closely followed will do more in many cases than mechanism and metal can possibly do."

From *Items of Interest:* The theory advanced by Doctors Underwood and Miller, of England, is worthy of consideration. They say that caries is absolutely dependent upon the presence and prolification of organisms, and that those organisms attacked, first the organic material, and feeding upon it, create an acid which removes the lime salts; that all the difference between caries by acids is due to the presence of germs. They add, "We feel justified, in concluding that the successful exclusion of germs would prevent the disease," and they recommend the use of eucalyptus oil as an antiseptic. While the doctors' theory may be correct in part, I differ from them in the excluding of germs by antiseptics.

Rotating spherical and oval granules of *Bacillus subtilis* may be found in the blood and tissues during health; a low state of vitality would cause these germs to spring into active life and destruction; the absence of lime and chemical action would produce the same result, making the origin of disease internal as well as external.

Doctor A. E. Salmon (employed by the Government as a microscopist, in the Department of Agriculture), states, that in examining blood drawn from his own finger, he has found considerable quantity of rotating spherical and oval granules, the latter resembling the spores of *Bacillus subtilus*. Dr. Lewis and Prof. Tugel, in their experiments, also found bacteria in the blood and tissues.

Dr. Burden Sanderson repeated these experiments, finding bacteria. Also Drs. Nenki and Gracosa. They all favor the view that the bacteria germs do gain entrance into the blood and tissues in health.

Thermal changes, I claim to be the cause of many failures in filled teeth, the metal being more susceptible to the action of heat and cold. Considering the natural warmth of the teeth, the resisting action is not equal to the expansion of metal, and in contracting

there is room at the approximal surface for secretion and chemical action, causing disintegration.

I now exhibit three teeth, the lateral tooth filled years ago; I have no knowledge as to who did it; the two bicuspids I extracted and threw into warm water, 110° Fahr., prepared and filled them, keeping the teeth at a normal heat until they were filled. They were then examined by Dr. G. T. Robinson, a microscopist, of Camden, N. J., he having had four years' practice in microscopical observation. After these teeth were examined I immersed them twenty times, alternately, from five to fifteen minutes each, in ice-water and water as hot as could be held in the mouth, from 120° to 125° Fahr. They were then placed under a microscope. I now give you Dr. Robinson's statement, with drawings representing the fillings before and after the experiment:

*Expt.* 4.—*The Perfect Gold Filling.*—The filling was perfectly uniform previous to the experiment, but after the immersion five prominent cavities were noticed in the filling. A very large one at the edge of the filling was sufficiently deep to expose the newly cut border of the tooth.

*Expt.* 2.—*Small Gold Filling.*—Before the immersion, a slight depression was noticed about one-thirtieth of an inch from the border of the filling, and which underwent such a marked change during the experiment that when examined afterward a large cavity was found to exist. Many of the smaller cavities became enlarged and gave forth numerous cracks; in other places large cavities had appeared, one of which extended nearly half way across the filling. Another marked feature of the change was the tendency of the filling to take on a sponge-like appearance, especially near the edges. There was at one edge a crack in the tooth so deep, indeed, as to completely undermine a portion of the filling.

*Expt.* 3.—*Composition Filling.*—Along the right hand of the filling there was a continuous gutter formed by the chipping off of the tooth structure at the junction of it and the filling; at the bottom of the filling were several wave-like grooves. After the experiment, it was noticed that this gutter had continued down the edge very nearly to the smaller end of the filling, thus almost isolating the surface of the filling from that of the tooth. Another interesting point to be noted is, that the wave-like impressions had almost disappeared; a few narrow lines only remained. On the left hand border of the filling there was a remarkable fracture of the tooth, rectangular in shape and of considerable depth. As we have no method of obtaining depth in microscopical work, I can only estimate the depth to have been about one-ninetieth of an inch. Over the surface of the filling were noticed numerous small cavities. On the upper right hand border, the destruction had been more extensive, cracking both the filling and the tooth to a depth even greater than on the opposite side.

*Expt.* 1.—*Raised Filling.*—There were numerous instances in this filling which tended to show that these changes were due to the action of the cold and the heat; the difference between the filling before and after the experiments will certainly illustrate this. It was

noticed that the cracks had become more extensive both in the filling and in the tooth structure; there was one very interesting example of this to be seen on the right-hand side of this filling. In the filling, previous to the experiment, there were seen two tongue-like processes shooting out of the sides of the filling; these were formed by the cracked enamel. In the filling, after the experiment, it was noticed that these tongues had coalesced, forming one uninterrupted area of cracked enamel. This filling also illustrated the great depth to which it was cracked, there being several places in the filling where the amalgam had been removed to a depth of one-seventieth of an inch. In the upper portion of the filling was seen a shallow groove or gutter which was noticed after this experiment had been performed. This was not very deep, and could only be noticed in a certain position of the light. At the bottom of the filling, the cracked enamel had extended outward in a tongue-like process about one-ninetieth of an inch long. Careful examination of the phosphate filling, both before and after the experiment demonstrated the fact that the agents heat and cold had no destructive action on the filling or tooth, and from this fact, I am led to believe that no contraction or expansion took place. Materials used in filling were Justi's Cohesive Foil, King's Occidental Amalgam, Welch's Phosphate.

In conclusion, to all appearances, these fillings were tight previous to their examination by Dr. Robinson, and I admit that they were only ordinary in finish; had they been subjected to the chemical action of the fluids of the mouth during the test, the change would have been more marked, but the result of the experiment has proved my theory correct, and we feel amply repaid for the investigation.

In considering the loss of teeth, the causes may be enumerated thus: Accumulation of tartar, mercurial salivation, fear of undergoing dental operation and the expense attending the same, a desire for pretty false teeth, lack of faith in the ability of the dentist to save them.

A motion of DR. OSMUN, that the visitors present be allowed the floor, was carried.

DR. OSMUN—The paper of Dr. Wallace, I think, ought not to be passed without some discussion. It is a very carefully prepared paper, I should judge, and he has taken a great deal of pains to prepare his specimens. With reference to one part of the paper, I hold that the fearful ravages we notice in people's teeth are largely due to dissipation and early marriages. Waldman and Hume say the frequent birth of children from unhealthy parents is undoubtedly a large and growing cause of so many soft, chalky and decayed teeth. One of the other causes, I think, is the crowding of children at school unduly. It is not an unusual thing now to see children of nine or ten years of age standing intellectually where they ought to be at sixteen or seventeen, to the great detriment of their physical being. I have seen many cases where I think I could trace the defective teeth directly to that cause; and where their parents have

followed the advice, sometimes of their physician and sometimes of myself, and have removed the children from school, and given them plenty of fresh air and sunshine and plain food, the result has been marvelous in a short time. In regard to fillings, I doubt whether there was ever a gold filling inserted which would not, if carefully examined, show some little deviation from a perfect structure. It is almost absolutely impossible to so put gold in juxtaposition with the tooth substance that, under the microscope, it will not show some defects. But the majority of gold fillings would, I think, withstand all the ravages of further decay, if they were put in so that the food is not retained above the filling. I think the paper is an admirable one, and I am under obligation to Dr. Wallace for it.

DR. J. PARMLEY BROWN—That, certainly, is a very interesting subject, and if you get it started, there will be no dinner for any of us to-day. The Doctor tells me that he has, among other microscopical examinations, examined cavities of decay, irrespective of the insertion of gold, etc. It is a large subject, which the paper has only commenced, and it would require his life-time, and his children's and grandchildren's, to cover the ground. There is no question that in this age we have too much forcing. I am trying to force my children not to go ahead. We all know that *Flora Temple* had no record until about nine years of age. She was not worn out while developing, and she made a great race-horse. That is something that you gentlemen who went over to the race-course yesterday will know how to apply. Speaking of examining fillings by the microscope, I will say that I have not found it necessary to examine any under the microscope yet. I think that if you get your fillings so perfect that the naked eye cannot detect any defects, you will prosper with them. With reference to the effects of thermal action, I do not think many ladies and gentlemen are in the habit of putting red-hot pokers in their mouths or of drinking red-hot punches. I believe that everything that goes into the mouth goes on to the tongue, which is a sensitive member. The question of thermal changes and of electric or magnetic action, I do not take any stock in. If you do your work well, carefully preparing the cavity, cutting away all of the tooth that shows disintegration and that which has been partly injured, and if you carefully manipulate your gold, you can just tell thermal changes and electric and magnetic changes to step one side; you don't want anything to do with them.

DR. WATKINS—I like the tone of that paper very much, but I do not think the operation of filling is the only way to save teeth. I think the best way to save them is to protect them from decaying in the first place. Two important points have not been touched upon. One is the keeping of the teeth clean, and the other is using them properly. There is a great difference in the way people use their teeth, and there is a great difference in the way they clean them. Some people say they clean their teeth three or four times a day, whereas in fact they do not clean them at all; they only go through the form. And people should use their teeth in mastication. The teeth were made to work, not solely to ornament the

mouth or to help the tongue mumble the food around. They are made to masticate the food, and if they are made to masticate the food properly, instead of growing worse, they will grow better. When, at sixteen years of age, I entered the profession, my preceptor told me I had fourteen cavities in my teeth, and my teeth were soft and chalky. I had the fourteen cavities filled, and I do not think I have a cavity to-day, and my teeth are no worse than they were when I was sixteen years of age. I think we require harder food than is usually used, and that which has more lime in it. I believe the greater number of persons, when eating lamb or veal, if they come across a piece of white, soft bone, will shove it aside. I eat all that. It furnishes lime to my system and gives my teeth exercise.

DR. W. W. EVANS—Like Dr. Brown, I do not believe much in thermal changes, or action of that kind, and I do not think we need the microscope for seeing the defects in our work. Those defects generally stand out clear enough upon their face in the majority of cavities. I agree with Dr. Watkins most decidedly in regard to food, but not so decidedly as to the manner of cleaning or cleanliness, for I must admit that some of the dirtiest mouths I ever saw were the best. I do assert that we need harder food. I think a round steak will do a person more good than a porter-house. But our college boys come home and growl about the hard food they get there, whereas the hard food is the better for them. I think we should look to the diet of the people, rather than to thermal changes and chemical action, for the cause of the premature decay of their teeth. We can learn more about that in a few minutes in a practical way, than by theorizing a few years.

DR. CARLETON BROWN—I think Dr. Watkins hit the mark when he said the teeth require exercise. That was my theory, in a paper which I read about a month ago—that there is more in the proper exercise of the teeth than there is in chemical or electrical action or the heat and cold theories. Wherever you find teeth that have plenty of work, there, as a rule, you will find good teeth. As to thermal changes, of course these theories are often run to extremes, but I will relate a case: A gentleman came to me some time ago with a tooth split through the centre and through the roots. It was the second tooth of the kind he had had; one had split before in the same way, without any apparent cause. He thought it was from taking cold things into the mouth. I treated the tooth for a while, but it was so diseased that I could not do anything with it. He thought I was young and did not know anything, so he got me to write a note to a prominent dentist in New York. I wrote what I had done, and the patient took the note to the New York dentist, who took out the tooth and told him to go home, and said that I had done right. The patient came to me on Tuesday, or Monday, with another tooth that had begun to split. There was a large filling in the crown. He had been drinking some ice-water, and we attributed the splitting of the teeth to drinking these cold and hot things. The tooth was split in half, just the same as the other. I do not know whether the fracture goes through the root or not. I had not

time to do much with it then, so I tied it together with a ligature. I may perhaps put a gold band around it. If these fractures are not owing to thermal changes, I do not know what caused them.

DR. EVANS—When I said I did not take any stock in thermal changes, I merely had reference to the action of thermal changes upon fillings in the teeth. Of course, such changes have a very serious action upon the teeth themselves. They destroy a great many teeth, and also the very nerves that supply the teeth. Our housewives tell the cooks not to dip their ivory-handled knives in hot water. The teeth are simply ivory, and we should not treat them worse than we would a knife-handle.

THE PRESIDENT announced that Drs. Bonwill and Evans would hold clinics at 3 o'clock, and Dr. Osmun would hold one at 2.30 P. M.

On motion, the meeting was adjourned to 8 o'clock P. M.

## AFTERNOON SESSION.

During the afternoon, clinics were held by Dr. W. G. A. Bonwill, of Philadelphia, Dr. W. W. Evans, of Washington, and Dr. J. Allen Osmun, of Newark.

DR. BONWILL inserted an "all-porcelain tooth crown," of which he is the inventor. A superior central incisor was placed on a root where a portion of the mesial and labial surfaces were badly decayed far up under the gum, necessitating the replacing of the vacuum with the same alloy used for attaching the crown, and showing how such broken-down walls can be fully and substantially restored to their normal condition by Dr. Bonwill's process. His plan was substantially that which was published in the *Cosmos* of June, 1882. He exhibited many new forms of the Bonwill crown, which were as thin as any ordinary plate teeth, and all of porcelain; also another form, where a band or loop of platina was anchored into the buccal face of very thin skeleton porcelain fronts, for special work, saving very largely the palatal walls; also a porcelain front for bicuspids and molars, with two or more holes and no platina band or pin. Into these holes bands of his construction, or metal pins such as he uses in pivoting, are inserted and held by his alloy, making a porcelain front which, in case of fracture of the face, can be renewed by pressing on another with alloy. This admits of very short teeth being used and backing up the same with the alloy, retaining all the beauties on buccal surfaces. Dr. Bonwill also exhibited another special crown, without any platina pins, for rubber and celluloid work, which permits of repair in either case, without reheating. Any of these teeth exhibited can be used with or without a steel or other kind of pin, in plate work. They can be used also in continuous gum work, and avoid reheating for repairs. He also claimed for his new combination metal pins—three sizes—great superiority over platina pins, such as he first used in setting his crowns.

Dr. Bonwill also exhibited his very latest improvement in Universal Chuck Hand-pieces, for any and all dental engines, which he

claims is his best mechanical achievement. It is the smallest at the point of any now extant, and has a more powerful grip. The chuck is at the base of the hand-piece, and three sizes of bits can be used. He exhibited his dental engine, with his mechanical mallet, which he considers far superior to his electrical. It would seem that there is no end to the improvements he is making in his dental specialties.

DR. W. W. EVANS, of Washington, D. C., gave a clinic with his New Mode Heater, in the construction of artificial dentures with the celluloid base. He showed to what a high degree of skill and artistic taste this branch of dental science can be brought. His workmanship elicited the warmest praise and admiration from all present.

DR. OSMUN gave an interesting clinic with the electro-magnetic mallet, filling a crown and approximal cavity with heavy gold, demonstrating the advantages of this method over all others in rapidity of operating and comfort to the patient. Although the plug was inserted over an exposed nerve, capped with gutta percha, the patient experienced but very little discomfort. The filling was a fine piece of workmanship, and was warmly commended.

## EVENING SESSION.

There not being a quorum present at the appointed hour, nor for forty minutes thereafter, the meeting was adjourned to Friday morning, July 21, at 10 o'clock.

## THIRD DAY'S SESSION.

LONG BRANCH, July 21, 1882.

PRESIDENT BARLOW in the chair. After calling the roll, the Secretary reported the application for membership of A. A. Beardsley, of Tuckerton—sponsors, C. W. Meloney and F. A. Levy—and stated that he had passed the Board of Examiners and received his certificate. Dr. Beardsley was then duly elected to membership.

DR. LEVY—I think some action ought to be taken in reference to members who are in arrears for dues, and to bring the matter before the house, I would move the expulsion of all members who are in arrears two years.

DR. WATKINS—I do not think that motion is necessary at all. According to the Constitution, they are not members if they have not paid for two years, and their names should be dropped without any action at all.

DR. LEVY—I do not think dropping the names amounts to anything. In my opinion, they should be expelled.

DR. MEEKER—I offer an amendment to Dr. Levy's resolution, making it three years instead of two. Some may be able yet to pay up before the end of this year.

DR. LEVY—I accept the amendment.

DR. WATKINS—Would it not be well to leave it two years, and notify them that at the end of two years they will be expelled, if they do not pay up? I would offer that as an amendment.

DR. G. CARLETON BROWN—They are necessarily notified; the Constitution provides that they shall be notified. You cannot expel them without notifying them.

DR. GEO. C. BROWN—I have notified every member of this Association who is in arrears for dues, and they cannot plead ignorance that they are in arrears. I have notified all members who are owing dues, from two dollars up to fifteen. The Constitution has been complied with in this respect.

DR. MEEKER—As they have been notified sufficiently, I second Dr. Levy's resolution that we proceed now to expel those members who are in arrears three years.

DR. PALMER—I would like to ask whether the Secretary knows of any members who are in arrears three years, who would be likely to pay up their dues if further time were given them.

DR. MEEKER—I think the Treasurer could tell that better than I.

DR. LEVY—I would ask that the Treasurer read off the names of the members who are in arrears three years, counting this year as one year.

DR. GEO. C. BROWN (Treasurer)—Charles Dippolt owes $8, besides the assessment; William H. Dibble, $10; C. H. White, $6; M. H. Carpenter, $6.

PRESIDENT BARLOW—He is willing to pay his dues. He told me he was very anxious to keep up his connection with us.

DR. G. C. BROWN—I sent him his bill this year. C. W. Johnson, of Belvidere, owes $6.

DR. PALMER—I do not think there is any Johnson in Belvidere now; I think he is in Morristown.

DR. BROWN—Last year I struck off L. H. De Lange. Thomas Stevens owes $14. J. F. Fowler I struck off, but I received a letter from the Secretary some time ago, with $6 and a request to let him know how much he owed.

DR. MEEKER—I left his account, showing how much he owed and how much he had paid.

DR. BROWN—M. W. Heath has been struck off. He owed, in 1881, $10. B. F. Borden owed $12 in 1881. J. R. Goble, W. W. Dorlon and D. H. Thickstun were dropped last year, Goble and Thickstun owing $8 each, and Dorlon $10. Henry Rech owed $15 last year. G. S. Matlock never paid anything. F. A. Cummins, of Jersey City, $12. Alexander Stretcher, $8. J. L. Brown never paid anything. J. F. Deacon, expelled last year. That is all.

DR. BROWN—I move that the following named gentlemen be expelled from this Society: Charles Dippolt, William H. Dibble, M. H. Carpenter, M. L. Johnson, M. W. Heath, B. F. Borden, J. R. Goble, W. W. Dorlon, C. H. White, J. L. Brown.

DR. BROWN—I ask that an exception be made in the case of Dr. Dorlon. I received a letter from him last year, stating that he would pay up his dues. I sent him a bill this year, and his remittance

may possibly be at my office now. He requested the bill might be sent, and said he would pay it.

DR. PALMER—I know him personally, and at the next meeting can either have his payment or report that he will not pay.

Dr. Brown's motion to expel was adopted, the name of Dr. Dorlon being excepted.

On motion of DR. CARLETON BROWN, the Secretary was instructed to notify the expelled members of the action in their cases.

DR. G. CARLETON BROWN—I move that the Constitution and By-Laws, as laid on the table yesterday, be taken up.

The motion prevailed.

DR. LEVY—I move that the Constitution and By-Laws be adopted as a whole, and go into effect immediately.

The motion prevailed, and it was so ordered.

DR. G. CARLETON BROWN—I move that the Executive Committee be empowered to have the Constitution and By-Laws printed.

DR. LEVY—I move to amend that the printing be left with the committee that framed the Constitution and By-Laws—of course, they will have it done through the Executive Committee—and that the Committee on Constitution and By-Laws be authorized to have five hundred copies printed.

The motion prevailed as amended.

DR. OSMUN—The Executive Committee report that, after examining the Treasurer's books, they find a balance in the treasury of $118.25, up to the first day of the present session.

DR. GEO. C. BROWN—That has nothing to do with the receipts and expenses of this session; it is up the commencement of this session, and does not include 1882 at all.

DR. LEVY—I move that the report of the Executive Committee be received.

DR. MEEKER—I think that ought to be the Treasurer's report as audited by the Executive Committee.

DR. LEVY—I think it must be a report from the Executive Committee, coming, as it does from the chairman of the Executive Committee. However, I will withdraw it, and move that the Treasurer's report be approved, as audited by the Executive Committee.

The motion was carried.

DR. LEVY—The Committee on Photography beg leave to report that they have had the Society's picture taken, and that the proof will be here between 12 and 1 o'clock. I do not think there were any outsiders in it. The good-looking members were in front; the others in the rear. The committee would like to be discharged.

On motion of DR. GEO. C. BROWN the report was received and the committee discharged.

DR. MEEKER—Dr. McNaughton came to me just before he left for New York last evening, and said, in regard to the copies of the list of dentists in the State of New Jersey, which he had had published, that he had some 288 names. I think he had 300 copies published, and had exchanged some with dealers and Societies; and he wished to know what to do with them. I said I had no power myself as to their disposition, and would consult the Society. I

asked him if he was willing to go on with the work until he had made all these exchanges with the different Societies and dealers, and then deliver the balance over to me, for distribution to the members of the Society. He said he was perfectly willing, and after he had done it he would send the books to me, and I could deliver one to each member of the Society. Will some one make a motion to the effect that we are willing he should continue the work of exchanging?

DR. OSMUN—I move that the proposition of Dr. McNaughton be accepted.

The motion was carried.

DR. OSMUN—I hold in my hand an invitation to attend the meeting of the Southern Dental Association, and I wish to call the attention of the members present to what they propose to give the members who attend that meeting. I see that they are to have twelve papers. The clinical lectures are to be five in number; clinics in operative dentistry, twenty; in mechanical dentistry they are going to have thirteen. Sessions will be held during three days. They evidently intend to study dentistry. I hope we may copy after them. The meeting is to be held in Baltimore, on the 8th, 9th and 10th of August, in the Baltimore College of Dental Surgery. I would suggest that delegates be sent to this Society, and to Cincinnati, to the American Dental Association, also.

DR. LEVY—I attended one of the meetings of the Southern Dental Association, in Baltimore, and I never regretted it.

A motion by DR. LEVY, to send two delegates to each of the Societies named—the American Dental Association and the Southern Dental Association—was carried, and the President authorized to appoint them.

DR. LEVY—The members have to bring credentials from their State Society, in order to become members of the National Association; any member of the State Society can become a member by bringing credentials.

DR. WALLACE—How many delegates are we entitled to?

DR. MEEKER—Five delegates to each Association.

A motion to pass to the reading and consideration of papers prevailed.

The President, DR. FREDERICK C. BARLOW, then read his annual address, as follows:

## PRESIDENT'S ANNUAL ADDRESS.

GENTLEMEN—I shall not inflict upon you a long address, or go to any extent into the past history of our Society, but will confine myself to its present condition and wants as they may appear to me.

This is our twelfth annual meeting, although but our ninth as an incorporated association. Its successful past and present prosperity are matters of fact, and are but the natural result growing out of that feeling of harmony and interest which has ever seemed to characterize its proceedings. There is much, however, to be done to secure

a continuance of this pleasant state of affairs. A large number of those present were among its organizers, and each year has seen them seated at its councils, expressing a feeling of hearty interest, and putting forth their best endeavors to sustain and add to its reputation and usefulness. Our meetings, though interesting, must be made more so; there are many in practice throughout the State who are not enlisted with us, and who, if once enrolled, would be both profitable to the Society and profited and pleased by their connection with it. Then, there are a few who come occasionally, remain but for a short portion of the session, and manifest but little or no interest in its proceedings. We want all to come in, all remain, take part in the workings, contribute to the essays and debates, and share in the benefits to be derived from such connection.

Just here I would mention that it is a difficult matter to find those of our members who are willing to furnish essays, and the committee is obliged to rely upon the same contributors year after year. This, undoubtedly, is from fear of criticism, more especially among the younger members. One of our principal objects for meeting together thus annually, is to exchange ideas, and gather up the crumbs of information to be applied to our every-day practice, thereby providing for the welfare and comfort, professionally, of our patients, and adding to our reputation as skillful dentists. We are not all capable of expressing ourselves with that ease, grace and flow of language possessed by great orators, but all can contribute in their humble way to the general fund of information, and the mantle of charity will be thrown over all shortcomings. There are so many ways of arriving at the same results successfully, that what to some might seem insignificant, when taken in connection with that already and to be acquired, may prove of the greatest importance.

You are to be congratulated upon the good effects of the "law regulating the practice of dentistry" in this State; if not among the first to petition and secure legislation, its importance was so appreciated as a step in the right direction toward raising the standard of dental practice and education, that State after State has fallen into line, and had like enactments passed by their legislatures. Its workings, here have been so thorough, with but few exceptions—all coming under its provisions complying immediately—that, as I am informed by the Secretary, the Board of Examiners have but few applications other than from parties living outside the State desirous of taking up residence in it.

Such being the case, I would recommend to the Board and Society that a higher standard be required hereafter for a successful examination. My reasons for this are, that at the time of its passage, many young men were studying under able preceptors, yet were unable, from a financial point, to attend college, which, had they been compelled to do, would have obliged them to seek other callings. Nine years have now passed since the enactment of the law, and the subject of dental education has been so thoroughly ventilated that one wishing to embrace the profession should consider it incumbent to go through the regular course and graduate. All have had an opportunity; now let those coming hereafter be

obliged to show that they are, in every sense, competent to fill the position they seek, both to the profession and the public.

At this age of the Society, another departure might be taken to strengthen the cause of dental education and add to the importance of the Society, viz.: in adding another supplement to our State dental law by providing a degree in this wise: to any member of the Society, who has been in continuous practice for five years, upon making application to the Board of Examiners, and passing a satisfactory examination before said Board, a degree of Master of Dental Surgery shall be given, upon payment of the sum of.....dollars, the same to be registered in the County Clerk's office of the county in which they may be practicing.

We have the names of eighty active members on our roll; there have been ten new members added within the year; one has been expelled; three have passed the Board of Examiners. An omnipotent Providence has dealt lightly with us as an association, no deaths having occurred during the past two years. Thanking you for the kind consideration of which I have been the recipient since my connection with you, I can but trust that the many friendships formed may be as our motto, *Esto perpetua.*

On motion of DR. LEVY, the President's address was referred to a committee of two, the President appointing Dr. Levy and Dr. Geo. C. Brown such committee.

DR. JAS. G. PALMER then read the following paper:

## DENTISTRY NOT A MEDICAL SPECIALTY.

When I chose this topic, I had no intention of conveying the idea that dentists need not to know anything of medicine, as some of my friends have thought. On the contrary, I do most heartily believe in the urgent necessity for a knowledge of medicine in connection with the practice of dentistry. That, however, does not prove that the practice of dentistry, as it now exists, is a specialty of medicine, any more than does the fact that lawyers who have charge of cases involving more or less medical knowledge, and who take the utmost pains to become acquainted with the anatomy, physiology and even chemistry of the part or parts involved, proves them to be medical specialists.

A friend of mine, seeing the title of this paper, said, "Why, that is just what your profession has been clamoring for—recognition as medical specialists." Well, perhaps so; but I hope not—at least not as the medical profession desires to put it. Their idea of the dentist as a medical specialist destroys his identity as a dentist completely, swallows him up whole in the capacious maw of medicine, and declares him to be a medico-dentist, a dentologist, or to use the words of the invitation to the last meeting of the American Medical Association, at St. Paul, Minnesota, a "medically-educated dentist." See this invitation, as printed in our journals: "*Medically-*

*educated dentists* are recognized as specialists in *medical* science. All medical men of the *regular* school, practicing the specialty of dental surgery, are most cordially invited to procure credentials from their local *medical* societies, and join us at St. Paul."

The editor of the *Ohio State Dental Journal*, Dr. Geo. Watt, in the June number, under the heading of "Specialty or Not," desires writers on this subject to discuss it and not a side issue, and says that the question is not, "Are dentists members of the medical profession? but, Is dentistry a part or specialty of medical science?" As he once framed a code of ethics in which it was stated that "dental surgery is a specialty of medical science," we may presume that he believes it.

He claims that it is now disputed, because, to use his own words, "Very many dentists—perhaps the majority—lack very much in the way of a medical education." I do not agree with him, but think that one great reason why it is disputed is because, if allowed as the medical profession want it, it completely destroys our identity as dentists.

Let us look at the invitation to the American Medical Association. Only "medically-educated dentists" were invited, or even recognized. According to Dr. Watt, then, an exceedingly small minority only could have the privilege. Those of us who may have what is termed a dental education, or who may have fought our way by hard labor and study to something of a respectable position in our profession, are beneath their notice. Then, too, they do not agree with Dr. Watt, but, recognizing only medical men, assume that dentists must be members of the medical profession in order to be in good standing. Only those educated in "regular" schools are recognized by this American Medical Association as being "medically educated." That bars out any dentist who may have been so unfortunate as to have studied medicine in a homeopathic or eclectic college, no matter how well posted he may be in medical science, nor how high his standing and attainments as a dentist.

Then, these dentists, forsooth, must procure credentials from their local medical societies, utterly ignoring the existence of any dental societies. Does not this seem like a big effort to swallow dentistry, and transform it into such a specialty that its origin may soon be lost sight of, and the medical profession receive the credit of having evolved a new specialty? And why? Because dentistry has asserted itself, by its own innate strength, to be something which they now think they had better patronize. The establishment of a new section—one on Dentistry—in this American Medical Association, was hailed with many hurrahs; but if one must accept the ideas conveyed by their invitation this year, then I do not believe in dentistry as a medical specialty.

By whom has our profession been brought to its present state? Whose achievments in dentistry and dental science have won such applause as to cause the medical profession to look after us? Certainly, not *all* was done by "medically-educated dentists," in the sense in which that term was used by the American Medical Association. Many of our most prominent men achieved marked success

long before they were entitled to become members of any medical society, and to-day some of our leading men, notably in the field of histological research, who can discount almost any M. D. in relation to dental science, are not entitled to recognition by any society as Doctors of Medicine. I will agree that a knowledge of medicine, as applied to dentistry and to the organs we deal with, is helpful, nay is a necessity, and that the more one has of such knowledge, the better for him and for his patients. But it does not seem to me that the advantage of having this knowledge, or the existence of a necessity for it, determines dentistry to be a medical specialty.

Does the fact that one is an M. D. fit him at once for the practice of dentistry? We all know better. Yet he would be "medically educated," and with perhaps but little insight into the mysteries of dentistry, he may occupy a chair in some dental college and sit in judgment upon dental students. Our dental colleges are pointed to as being largely officered by M. D.'s, while the true representatives of our profession are often few; and this is taken as a sure indication that dentistry is but a branch of medicine. Have we not enough able, earnest, and willing representatives in our profession to enable us to entertain the hope that in time this dependence upon the medical profession may cease, and true representatives of our profession fill all our chairs? I have always had a pride in our profession, and while thoroughly believing in the advantage of a knowledge of medicine as applied to dentistry, I am in favor of dentistry as such, as a dental and not a medical science.

When, as is demanded by some, dentistry shall be permanently divided, and the mechanical, the prosthetic, division shall be thoroughly learned without regard to anything else, and when dental and oral surgery shall constitute another division entirely independent of the other—then this latter may, perhaps, be justly considered a medical specialty and be taught only in medical schools, but with the present relation of the mechanical to the operative department, I fail to see how dentistry can justly be termed a medical specialty.

DR. OSMUN—Dr. Palmer's paper is of that kind which dentists need above all other papers at the present time. The dental journals have a few writers who have a habit of crying about our being recognized by the medical profession and its societies. In my opinion, that is one of the grandest humbugs that ever existed. I agree with Dr. Palmer that an understanding of medicine helps to make a better dentist, but the grand corner-stone and the fundamental principles of dentistry are not medicine, are not pathology or therapeutics, but are practical mechanical skill. A man may understand microscopy and all the laws of chemical affinity, and what causes the diseases of the teeth and their decay, but unless he has the mechanical ability to so place gold or other material in juxtaposition with the tooth substance as to make a perfectly water-tight plug, he is working in vain, he is a failure. I do not decry medical education, I think a dentist is all the better for having it, but this everlasting cry about being recognized by the medical profession is absurd. The dental

profession has a niche to fill in the economy of nature and they must fill it. They do just as much for the cause of humanity as any medical profession that was ever inaugurated, whether homeopath, eclectic or allopath. The dental profession do not so much save life, but they prolong it. Let us as dentists stand on our own feet, and let them understand that our profession is a part of the great commonwealth as much as themselves, and that we do as much good as they do.

DR. BONWILL—I am not here as a listener, for I cannot hear what is said, and it is difficult for me to enter into the subject otherwise than as I look at it from my own standpoint. There are many specialties in medicine where the field is not as large as it is in dentistry, but I do not see why dentistry should be attached to medicine any more than medicine should be attached to dentistry. I would reverse it, and let medicine be attached to dentistry. One of the most important principles in dentistry, in my opinion, is mechanical skill; and the young men who enter the profession should have a real mechanical aptitude, rather than cultivation or learning, to begin with. If not born with a special aptitude for mechanics, they should cultivate that talent and be early engaged in some mechanical pursuit. That is the grand work of a true, practical, useful dentist. Although I was reared in medicine myself, I think that too much attention to medicine in dentistry is calculated to make lazy fellows instead of dentists; they are inclined to stand too much on their dignity as medical men, instead of being dentists; they get ashamed of the dental calling. A few men have gone over and have really become M. D.'s, and you find those men gradually sheering away from dentistry; they have not that same love for dentistry that they once had, and you do not find them accepting dentists as their brothers. And in the same way, you find medical men shying as much from dentists, except a few who have brought themselves to a high standpoint. They are not as liberal here as they are in England; in this country no man can get before a medical association unless he is an M. D. It is not so in England. I do not believe in stooping to the medical men or subjecting ourselves too much to them. If, instead of cultivating so much medicine and looking forward to medicine as the grand prize which all must attain, dentists would devote themselves to the practical details of their own profession, in which there is just as much honor, their success and usefulness would be greater; and if the dental colleges would have a preliminary examination of candidates, and instead of taking anybody—Tom, Dick or Harry—into the dental profession and graduating them, if they would take only such men as are naturally adapted to dentistry, who have natural mechanical talent, with, of course, a comparatively good education, they would turn out a better class of useful and practical dentists than they have been doing. If men have the practical mechanical talent and skill, we must not exclude them because they are not so well educated as we could desire, for they are more likely to make good, practical dentists than a great many who have more education. In the last fifteen years we have taken greater steps than the medical profession. Instead

of paying so much attention to the medical profession, let us keep ourselves to ourselves to a great extent. But we must have a preliminary examination of men before they enter the dental colleges, and if they are found to be not prepared for dentistry, let them go elsewhere. Look at our schools in Philadelphia. I said to one of the professors the other day: Why do you take in everybody who can pay the fees? You have the opportunity to raise the standard very high, but whereas a student in order to be graduated in any medical specialty would have to take a three years' course, a matriculant in dentistry can come into the university and take a two years' course and become a specialist in dentistry, giving him one year above those who practice upon the eye and the ear. It is an undignified position for the professors of the university to place themselves in; it only lowers the character of the university. It is a grand mistake, and we should try to lift the standard of the profession by having a preliminary examination. We have to open our doors as widely as any other school where they do not claim to give a medical education. Out of 300 matriculants, only half a dozen went through. If our colleges would take proper steps to exclude unfit applicants, and if we would allow no man to come into our offices whom we knew was not prepared for the practical work of dentistry, the profession would be the better for it.

On motion of DR. BUNTING the paper was passed.

DR. E. F. HANKS read the following paper, entitled

## SHALL MECHANICAL DENTISTRY BE SEPARATED FROM OPERATIVE?—SNOBS IN DENTISTRY.

GENTLEMEN—There seems to be an idea among a few dentists that the time has come when the two branches of dentistry should be divorced; that the highly cultured and finikin operator looks down upon the construction and insertion of artificial teeth as beneath him. It is the part of a mechanic's trade and not the occupation for high-toned gentlemen.

Gentlemen, it makes my gorge rise when I read such things.

From the day the dental profession, began to toady to and run after the medical profession up to the present, there has been a decadence in certain branches. Years ago, when dentists had no ambition to be considered a branch of medicine, they were not ashamed to acknowledge that they made artificial teeth, but rather gloried in it; took pride in it, put their best efforts into it and brought forth better work an hundred fold than we see to-day.

They, the would-be separatists, say that the making of a set of teeth requires mere mechanical skill. Gentlemen, ninety-nine one-hundredths of the work we do is work with the hands requiring skill. To make a set of teeth requires manual labor with properly formed tools or instruments, backed by good judgment and artistic taste. To fill a tooth, the premises are not one whit changed. If anything, it is certainly more difficult to make a perfect set of teeth that will

harmonize in color, shape and adaptation to the general surroundings, than it is to fill the most difficult tooth; at least I find it so. I hope when I speak this way of a set of teeth, no one will suppose I for an instant refer to the miserable botches we see every day, consisting of a conglomeration of shining bits of porcelain and red rubber, which look as if they were thrown together with a pitch-fork.

In this country, thank God, if a man keeps himself decent in appearance, has a fair education and behaves like a gentleman, he is not looked down upon, whatever his occupation. Suppose our occupation is almost purely mechanical; suppose the great bulk of our work is manual skilled labor, is that any reason we should be ashamed of it and belittle one-half of it, and try by fawning upon the medical profession to shine by their reflected glory. Gentlemen, has it not struck many of you that there are many things that the medical profession have to do which is much more distasteful and fully as mechanical as ours? Surgery in all its branches is almost entirely mechanical. The operation of removing impacted excrement from the anus with the handle of an iron spoon is purely mechanical but not particularly pleasant. The attendance on a case of labor in the top story of a tenement house in the month of July is more or less mechanical, and not altogether pleasant. And there are hundreds of unpleasant things the medical profession are called upon to do, infinitely more degrading, if you will, than the getting one's hands dirty making a set of teeth. I have yet to see a physician crying stinking fish about his profession and wanting to put out to some low chap around the corner the disagreeable part of his legitimate work.

There was an old gentleman I once knew, who said no man had any business to send his son to college unless he could at least give him a hundred thousand dollars to live on. And this old man's idea about ordinary college education is somewhat applicable to the dental colleges, and it is the only quarrel I have with them.

The professors are more or less in full operative practice, and as it pays better than the so-called mechanical branch, they naturally cling to the former and drop the latter; and having dropped it, they naturally get above that they can live without; and in teaching the boys they, consciously or unconsciously, give them the idea that the making of artificial teeth is somehow beneath them, and the young men thereafter devote themselves exclusively to the mechanical work of filling teeth, vainly deluding themselves with the idea that in escaping the construction of plates they have escaped the mechanical feature of their profession, calling, vocation or trade, what you will, for according to Webster, they all mean about the same thing.

The result is a lot of half-fledged young dentists, with a big diploma, perhaps a gold medal or other prizes, all having reference to the filling of teeth, which is very well so far as it goes, but it don't go far enough; for they know about as much about the practical fitting and making of a set of teeth on the different bases as a child. Such teaching is wrong, gentlemen; wrong in every sense. In the first place, the young men start out with false ideas; they

are ashamed of one-half of their vocation, they make boast of their contempt of it, and their firm intention to never make a set of teeth. They hang out their shingle and proceed to wait. After having waited quite a spell, they continue to wait some more. After a while they begin to think something must be wrong, there must be some mistake, and gladly welcome the first set of teeth as a friend, not an enemy.

They learn after a while, if they are not in a large city, that it is absolutely necessary for every dentist to know how, and to be able to do anything in his line, and to do it well, that is presented, if he expects to live by his vocation. The practice of medicine, of law, and I had almost said the practice of the ministry of the Gospel, are not looked up to in this country, these late years, with the same blind worship and awe as was common in the last century, and even now in England. My late father-in-law, an old Englishman, used to tell me that he had received many a sound drubbing for not taking off his hat to the parish priest, as he called the Episcopal clergyman. Whatever lingering prejudice may exist here, is imported from the old country, and is fast dying away. There a man in trade, or following one of the mechanical pursuits, is looked down upon, however rich, refined or educated he may be. The professions come next, and the nobility crown all. Most business men consider themselves on a par with the professions. They and most people in this country look upon all occupations alike, so long as they are decent and honest. What are called the learned professions, with the rest, are looked upon as a means of earning a living. There is a different idea in England. It is not legal for a lawyer or doctor to sue. There they are theoretically supposed to be above working for vulgar lucre. They perform certain services, for which they receive a present, which is always given secretly, as some member of the family bids the doctor adieu.

Here the lawyer or doctor may sue, the same as ordinary mortals. He works for his living, he respects his calling, and is not ashamed of it; therefore people respect him. If we do likewise, respect our calling, not attempting to be more than we are; instead of being dentists, pure and simple, trying to be half physician half dentist, having the title of Dr. thrown at us by courtesy, in common with corn doctors, druggists, and horse doctors, calling ourselves, and requiring others to style us, as they do in England, plain Mr., we will grow to respect ourselves, for what we are and not for what we would like to have others think us.

DR. EVANS—I do not know that Dr. Osmun can handle that subject very well, theoretical as it is. As Dr. Bonwill says, he is thoroughly practical. He does not believe in the theoretical teachings of the present day, and believes that a great mistake has been made in all our colleges for the last few years, in looking for that high standard of education which is making lazy gentlemen and not dentists. It is a great mistake. The examination should be in the direction of a man's mechanical knowledge, and not as to his classics. Classical knowledge is not necessary, mechanical knowl-

edge is indispensable. As to the connection of dentistry with medicine, I think we need, of course, a certain amount of medical knowledge, but the idea that we are so greatly dependent upon it is a mistaken one. I received an invitation to attend the medical convention at St. Paul, but on the very grounds of the wording of it, which excluded all who are not doctors of medicine, I staid at home. I felt sufficient independence in my own special department, although I am a graduate of medicine. I cannot help but recognize that dentistry is a specialty of medicine to a certain extent, but that we are to be patted on the back now and brought forward by the medical profession, which has for so many years ignored us as a low class of trades-people, is something that I must object to. There is no question that in every particular, medicine is thoroughly dependent on dentistry, certainly quite as much as dentistry is dependent on medicine. They have got to take their medicine through their mouths—except when they use syringes or iron spoons! As regards separating the two branches of dentistry, mechanical and operative, that I have approved of for several years back. As medicine has found it necessary to split up into several specialties, so dentistry has now grown to a science, as it were, separate and specifically distinct, and has grown too large in its details for one man to take in and do thorough justice to it; he cannot do it. With reference to the idea of the mechanical branch, so-called, being inferior to the operative, and being done around the corner by our poor young fledgings, while the gentlemen who consider this dirty work beneath them take all the balance, that I do not approve of. It certainly requires a higher degree of skill on the part of a dentist to be capable of doing a good, artistic work in mechanical dentistry than is usually required in operative dentistry. Certain gentlemen with their high education assume to ignore mechanical dentistry, but the true inwardness of that is that they are incapable of doing it, and that is why they ignore it and cry it down. I have thought it would be proper to educate men for that special branch, but the first thing should be to find out whether they have mechanical skill. To make a first-class mechanic, the talent for mechanics must be born in the man. Of course, it can be cultivated to a great degree, but in order to make a really first-class mechanic he must be born with a love for all the arts. I think the gentlemen in the operative department ought to take such men with them, where they meet such a man, a man who is endowed with high mechanical tastes—they should take him by the hand, take him in with themselves and make him their equal in every way, as he is their equal, and in reality superior; but they are not willing to allow him equality. The skilled operator and the skilled mechanical dentist should be in the same office, not on account of the man who makes a specialty of mechanical work, but to humor the pride of those whose acquaintance he seeks to cultivate. The ladies and gentlemen who are willing to pay for high-skilled work do not exactly like to go to your office if it is known as a separate and distinct specialty in artificial dentistry. They do not want to be seen by their neighbors. But if the operator and the specialist in artificial dentistry have their offices together, then the

people go there without hesitation, and the outside world does not know which specialist they go to; they appreciate the mechanical specialist for his skill and his art, and they are willing to pay for it, and by paying for it they stimulate him to greater excellence and enable him to build himself higher. At the present time there are very few colleges that are teaching that branch. In the majority of colleges the professors in the different chairs, even in the operative department, are incapable of doing really skilled work. You may take any gentleman of ordinary education from the street, give him the text-books of either medicine or dentistry and let him read them up and make his notes, and he will get up before a lot of students and deliver lectures just as well, and which will have as good an effect upon the students as the lectures that are delivered in most dental schools; and he will be just as capable of answering the questions that are put to the professors, who beat around the bush and evade questions put by students because they are not capable of answering them. Too much education, too little practice, is their trouble.

DR. WATKINS—Dr. Evans is a medical man and I do not think he quite appreciates how little education dentists generally have. I think that is the great lack of our profession, the want of education. We have a few men in the profession who are highly educated, and who perhaps carry the thing a little too far, insist too much upon education, but as a rule I think we have altogether too little education in the profession; and I think the time has come when every man who enters the profession of dentistry should have a knowledge of medicine. I think a knowledge of pathology and therapeutics is just as much a necessity as the ability to make a set of artificial teeth or to put in a gold filling. As to mechanical dentistry, Dr. Evans is the only one that has mentioned art in connection with it. I believe that in order to be a thorough mechanical dentist a man needs to be an artist as well as a mechanic. If he is not an artist, his work will look as if some blacksmith had pitched together a lot of white ivory and red rubber with a pitch-fork. A good mechanic can make a fine piece of work in his laboratory which will look very nice out of the mouth, but when placed in position it may not be becoming to the patient at all, although in itself a very beautiful piece of work. Therefore I think artistic talent is just as necessary in a dentist as mechanical.

DR. EVANS—Of course, I do not hold that a man should be an ignoramus in dentistry, or that an ignoramus is likely to make a good dentist; he needs to have a good common school education; what I meant to convey is that it is not necessary to require him to be educated in the classics. Our dental schools ought to teach a certain amount of medical knowledge, therapeutics, anatomy and all necessary branches, only they ought to confine it to the more direct points of dentistry instead of branching off into all the higher departments of medicine. It is very necessary to have a certain amount of medical education.

DR. GEO. CARLETON BROWN—I don't think anybody ever had too much education. If anybody thinks he has, it's a new theory. It is true that a man can get along without having a great deal of

education, and be practically useful, but that is not all; he might do better if he was better educated. I think it is a good idea to educate the dentist up to the medical man, and it is also a good idea to educate the medical man up to the dentist. I think we all have, at some time, run across cases in our practice that have been in the hands of a medical man, and which we can take care of a great deal better than he did. And there seems to be danger of running to extremes in the direction of mechanics. In my opinion we need surgical knowledge and medical knowledge just as much as we need mechanical knowledge. A man who does not know the anatomy, physiology and therapeutical treatment of a part does not know how to treat it. The treatment of the teeth is something else besides the mere packing of gold. The dentist uses creosote, carbolic acid and other agents, and should know why he uses them and what effects they produce. That kind of knowledge, I think, is just as necessary as mechanical knowledge. We also have the antrum and other parts to treat, where surgical knowledge is necessary. Some time ago a lady came into my office who was suffering from pains in the side of her face; she had been to her dentist to see about it, and he had told her there was nothing the matter. She had been suffering two years. I found an established case of pericementitis; I went up and examined the bone and found it all necrosed. I treated it and cured it. That dentist had not been pretending to have any knowledge, I don't think, outside of mechanical knowledge, and evidently did not have much. I had another case a few days ago, of the same kind. The patient had been to a dentist and was told there was nothing the matter, yet it was a very marked case of the same disease—pericementitis. I do not think we ought to ignore medical and surgical knowledge.

DR. HANKS—I did not mean to belittle the operative and surgical departments of dentistry, but I object to having the mechanical and artificial departments of dentistry belittled and looked down upon, and spoken of as being separate from dentistry, and as being beneath us to do that kind of work. If any man makes a specialty of filling teeth, he should do so without belittling the other branch, and if a man chooses to make a specialty of artificial teeth, that is his privilege, and he should follow it without belittling the other branch. In country towns—and a great portion of dental practice is there—the dentist should be a man who knows how to do all branches of dentistry, and you can never separate them, in a practical way, in country towns. They can only be separated successfully in large cities, where there is a large field for special practice. Take a village of a thousand inhabitants, and the idea of having a mechanical dentist and an operative dentist there is one of the most impracticable things you could suggest.

DR. LEVY—One or two questions. If they propose to divide mechanical and operative dentistry, how would they divide them? Would you call the carving of the teeth before filling mechanical? And would you call the putting in of the gold mechanical? or would they be operative? And if you were going to put on one of Dr. Bonwill's crowns, would you call that a mechanical or an operative

operation? And the putting on of one of Richmond's crowns of gold, what would that be? And the treatment necessary before putting it on, would that be operative? If some one will tell me where this division comes in, I can understand it better.

DR. HANKS—Nobody wants to divide.

DR. OSMUN—Dr. Levy wants to know where the dividing line comes. Dr. Evans' idea was that a man who wants to make a specialty of mechanical dentistry must study something besides mechanics; he must be an artist and must have the same qualifications that the artist and sculptor has, in order to make a truly scientific piece of work, and have it harmonize with the mouth that is to wear it. I think there is no operation, scarcely, in dentistry, but what is essentially mechanical. The cutting out of cavities in the teeth and putting gold in them are both mechanical. The putting on of Bonwill crowns, and the grinding of teeth and putting them in are mechanical operations. There is scarcely a thing that we do, except the injection of aromatic and carbolic acid, and the cutting away of hypertrophied tissue, which are surgical, that is not in its nature mechanical. Yet, from some cause, some of the dentists seem to think the practice of mechanical dentistry is belittling their position in society, and that it must be recognized as a distint profession. They think it is not just as high-toned probably, as the surgical part, and so they cry down the mechanical branch, lower it and make light of it; and if they have any of it they take it around the corner and have it done for two or three dollars. But they don't think it undignified to take the money for it. It is very rare that a man, who boasts himself a thoroughbred operative dentist has all the attributes of a first-class mechanical dentist. A man who has natural abilities for mechanical work, and devotes himself to it, will make better work than one who devotes himself to his chair. I think it takes some skill to make a nice set of teeth; more skill than it does to fill teeth.

DR. WATKINS—It is claimed that all those operations of excavating, filling, crowning teeth, etc., are mechanical. They may perhaps be mechanical, in a sense, but at the same they are truly surgical; every operation on the living tissue is surgery. It may be mechanical, too, but still it is surgery, and in order to perform a surgical operation you must have some knowledge of medicine, physiology and anatomy. We cannot be successful dentists unless we have such knowledge; therefore I conclude that it is absolutely necessary to keep the two branches together. I do not think that justice can be done to the two branches if they are separated. I think they are intermingled in such a way that we have got to be mechanics as well as medical men.

DR. LEVY—What would you call working on a dead tooth, or necrosed bone?

DR. WATKINS—That is surgery; it is natural tissue.

DR. LEVY—You said living tissue in your first definition of surgery.

DR. WATKINS—In setting a Bonwill crown you have surgery and mechanics combined; you work on the natural tissue, and then you

apply a foreign substance. There are many cases where the two branches are combined, and I do not see how you can separate them.

Subject passed.

DR. LEVY—The committee on the President's message report that they approve of the suggestion that a higher standard of examination be required of candidates, and also that portion of the paper refering to the granting of the degree of M. D. S., and move that a committee of three be appointed by the President to claim that privilege from the Legislature.

DR. PALMER—I move that the report be received, adopted, the committee be discharged, and the committee spoken of appointed.

DR. WATKINS—I think that if this Society is allowed to give a degree, it will prevent a great many young men from attending a dental college, where they would receive a greater benefit. It lowers the standard. I do not think any man should go into practice now without attending a dental college.

DR. OSMUN—If a man is capable and can pass the required examination, why should not he have a degree as much as the man who passed the college examination? If a man can pass the examination before the board successfully, provided that examination is severe and high enough, and he shows the necessary ability after five years' study, why should he not have a degree as much as any other man? I am in favor of it.

DR. PALMER'S motion prevailed, and pursuant to it the President appointed the following committee: Dr. Levy, Dr. Clark and Dr. Meeker.

THE PRESIDENT appointed as delegates to the Southern Dental Association, Drs. Osmun, Meloney, Chew, Richards, and Watkins. As delegates to the American Dental Association, Drs. Levy, Scarborough, Marsh and G. C. Brown.

A paper was read by DR. L. S. MARSH, entitled

## THERAPEUTICS.

In selecting this subject for a paper, I am aware I am dealing with a subject of great pith, and in practice one of great moment, and I feel my inability to give anything like adequate treatment to one so important to our practice.

The treatment of the subject, therapeutics in general, would require volumes, and in the necessarily and proper abbreviation of papers to be read before this Society, the subject must to a large extent be treated superficially, even when narrowed down to that pertaining more directly to the dental practice.

Therapeutics, as you are aware, is derived from a Greek word, meaning to nurse, to cure. It is that department of medicine pertaining to the treatment of disease, or perhaps more properly, the department which comprises an explanation of the *modus operandi* of medicine. Embracing as it does all that pertains to the application of remedies to the cure of disease, it is properly divided into

two departments, the science, which must be distinguished from the practice of therapeutics. Science must have for its very foundation some knowledge of the *modus operandi* of medicine, while the latter, the practice, may be empirical, or depend simply upon experience. I don't propose to go into the general practice of medicine, I have neither the time nor ability to do justice to so extensive a subject. On no question, perhaps, have scientific men differed more than on the theory of the action of medicine. Facts incompatible have been presented by disagreeing parties, or perhaps more commonly, the same facts have received two distinct and opposite interpretations. Many hypotheses, when subjected to a test, are found to be grounded on bare assertion, and to be destitute of logical proofs. Analogy is also used to increase a probability already shown, but that is not reliable proof, for we find that medicines are capable of producing the same result in very dissimilar ways. How, then, can we arrive at the truth? The best and surest way is to be extremely careful in the means which we employ in its discovery. Whateley, in his *Elements of Logic*, says, "Every branch of study, which can at all claim the character of a science requires two things: 1st, A correct ascertainment of the data from which we are to reason; 2d, Correctness in the process of deducting conclusions from them." We as dentists are not careful and exact enough, we too often confound assertion with facts; mistake hypothesis for truth. When we have a theory that rests upon very slight foundation we should be careful to keep in mind that it is but a theory, and not assert it as a truth. I don't wish to be understood that it is not our duty to inquire into uncertain things; far from that. I consider that those who officiate, in however humble a capacity, as the pioneers of knowledge have to hazard many conjectures before they arrive at the truth; many unknown paths must be investigated; many doors tried ere we enter.

Bacon says, "If experience is not directed by theory, it is blind." This brings me back to the two systems of medical treatment—the empirical and the true or rational school. The first, by accident or experience, finds that certain medicine is useful in the treatment of certain disorders; henceforth it is administered. Thus an empirical system is elaborated, requiring but a comparatively small degree of knowledge. On the other hand, for the proper perfection of medicine as a rational science, the observation of facts is indispensable as a beginning. Still we must not be content with taking them separately, but compare together a number of facts, and thus be able to draw conclusions. Our plans of treatment will then become rational and we will be better able with the proper knowledge of the symptoms of disease, to meet each by its appropriate remedy. To become more skillful and effective in our profession as oral surgeons, and to do all that man can do to alleviate the suffering of such as may come under our care, two things are, in the main, needed; the first is a right understanding of the causes and symptoms of disease; the second, a correct knowledge of the action of medicine.

Fifty years ago the condition of chemical research and the manufacture was such that new medicines were much more infrequent

than they are to-day. The *Materia Medica* was a book composed of reiterated formularies, and their action was comparatively familiar. At the present time scarcely a week passes without some chemical discovery that may prove of great value to the science of medicine. Once Peruvian bark was a standard medicine; now the advance made in chemical analysis has extracted from it some six or eight different alkaloids, with analogous properties, but different crystallization, and somewhat similar in their medical properties. So with opium and many other articles that formerly entered in the healing art in their crude state.

Diagnosis and nosology have made and are making most rapid strides, while it must, I think, be admitted that the understanding of the action of medicines and their agency in the cure of diseases is making much smaller progress; still by the earnest labors of a few able investigators, the doubts and difficulties are gradually being cleared away.

In the medical profession they have vivisection to assist them in therapeutical discovery, by which means the proper medical dose and the fatal dose, and their mode of action in both cases, are accurately determined as a starting point for further inquiry. Next, the new medicine finds its way into the hospital, and if the result of its use is deemed encouraging, the drug, having passed the experiment in the physiological laboratory and the hospital, finds its way into general practice. We, however, as dentists, to obtain the knowledge of the action of remedies, especially in outward application, must, to a large extent, experiment on the human subject. Consequently, we are often perfectly in the dark as to the operation of a remedy, and not knowing the particular manner whereby it acts, it may in the meantime suffice us to know the effect of a medicine when applied to the body. But I do not advocate letting the matter rest there, and the object of this paper, if successful, is to create a stronger determination to arrive at the truth. Too many of us, I fear, know but little of the exact action of the remedies we use; with the knowledge of the effect we rest satisfied. In painful and inflammatory conditions of the oral region, we almost universally use a preparation of aconite and iodine, which in such cases is as much our sheet-anchor as cinchona and its various alkaloids are in febrile cases in the medical profession. But, though knowing it to be almost a specific, how many of us could give an intelligent answer to the question of our patients, as to its *modus operandi?* In this enlightened age it will not be safe to presume too much upon the ignorance of our patients. They are becoming educated to the fact that the dental profession is becoming a body of educated men. Let us not, then, deceive them, for they expect and deserve something more from us than mere theory.

Let us, then, who feel dissatisfied with using our remedies empirically, as I fear too many are doing, bestir ourselves. Investigation and a desire to know the *modus operandi* of the remedies we use should more generally prevail. Then, instead of our present indecision and uncertainty on many points, we shall find ourselves

eminently qualified to wage the conflict with oral disease, being skilled in that science whose name bespeaks its peculiar importance —the science of therapeutics.

DR. PALMER—The paper is in harmony with the other papers read to this extent, that it does not claim that a dentist must be a physician, but does claim that he should have more or less knowledge of medicine, and in that I agree with it. That therapeutical knowledge, the knowledge of causes and effects and the reason why we use any given remedy, is what we ought to know more of than, I confess, I personally know, and the more we know of it the better for us all.

DR. G. CARLETON BROWN—This paper brings up the same points that we have been discussing. Dr. Marsh has illustrated my idea of the subject, and I am very glad that he has presented it in this form, showing that we have an idea, some of us, outside of mechanics.

On motion of DR. OSMUN, the paper was passed.

On motion of DR. MEEKER, votes of thanks to the Messrs. Leland, of the Ocean Hotel, for their courtesy to the convention, and to Drs. Bonwill and Evans, the S. S. White Manufacturing Company and the Wilmington Manufacturing Company, were unanimously passed.

On motion of Dr. G. CARLETON BROWN, the convention proceeded to the installation of the officers elect.

On motion of DR. MEEKER, a committee of two, consisting of Drs. Geo. C. Brown and F. A. Levy, were appointed to escort the President-elect to the chair.

DR. BROWN—I have the pleasure of introducing to you our newly elected President, Dr. Palmer.

DR. BARLOW—I am happy to receive you as my successor, Dr. Palmer, and I hope you will have as pleasant and successful an administration as I have had.

DR. PALMER—I am very sensible of the honor you have conferred upon me, and I will endeavor to sustain the dignity of the position as much as in my power lies.

DR. BUNTING, Vice-President-elect, on being presented to the Society by the President, said: Gentlemen, I feel very grateful for the honor you have conferred upon me; I trust it will not be misplaced, and that I may be able to maintain the dignity of the position to which you have so kindly elected me.

DR. MEEKER, on being installed, said: This, I believe, is the seventh year I have been Secretary of this Society. I am just as thankful to you for the honor you have again conferred upon me as when I first received it seven years ago. I hope I may always merit your approbation in what I do as well as I have heretofore. At all events, I will try to make the name of the New Jersey State Dental Society in my position a credit.

DR. GEO. C. BROWN, Treasurer—I have only to say that I am much obliged to the gentlemen of the Society for their continued confidence in me, that I shall endeavor, while I am Treasurer, to

collect the dues and assessments as closely as possible, and shall allow no money to go out of the Treasury unless in proper form.

On motion of DR. LEVY, a vote of thanks to the retiring officers was passed.

DR. LEVY—Mr. President, do you not think we ought to take some action in reference to the two old members who are sick and not able to be here, Dr. Cosad and Dr. Hayhurst?

DR. OSMUN moved that a resolution of the Society, expressing their sympathy and condolence with the two absent members be passed, and copies of the same sent to them by the Secretary.

The resolution was passed.

On motion of DR. OSMUN, the convention adjourned to the third Wednesday of July, 1883, at 10 o'clock A. M., in Asbury Park.

# PROCEEDINGS

OF THE

# NEW JERSEY STATE DENTAL SOCIETY.

## THIRTEENTH ANNUAL MEETING.

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ASBURY PARK, July 18, 1883.

The meeting was called to order at 10.40 A. M. by the President, DR. JAMES G. PALMER, and the Rev. Mr. Jones offered prayer.

The roll was called by the Secretary.

The Treasurer asked that the next order of business, the payment of dues, be postponed until afternoon, as he had not his books at hand. It was so ordered.

The minutes of the meeting of 1882 were read by the Secretary, and were approved.

Applications for membership were received from E. R. Brown, of Matawan—sponsors, Dr. F. A. Levy and Dr. C. A. Meeker; and B. F. Luckey, of Paterson—sponsors, Dr. J. C. Clarke and Dr. C. A. Meeker; and referred to the Examining Board.

The President called attention to the revised Constitution and By-Laws, copies of which were in the hall ready for distribution to members.

The Secretary stated that the Examining Board had reported favorably upon the applications for membership of E. R. Brown and B. F. Luckey.

On motion, the Secretary was authorized to cast the ballot for the candidates named, and they were declared duly elected to membership.

DR. HAYHURST, Chairman of the Examining Board, asked permission to defer until afternoon the report of that Board, Granted.

DR. G. CARLETON BROWN asked that the report of the Executive Committee be deferred until afternoon. Granted.

The Secretary read his report as Prosecutor, which was, on motion, accepted with thanks.

## PROSECUTOR'S REPORT.

Your Prosecutor would report the following cases that he has given attention to throughout the year:

The first case was that of C. E. Aguirrea, who was complained of by Dr. G. C. Brown, of Elizabeth, as practicing at Westfield, and not registered in the County Clerk's office at Elizabeth. Several communications were had with the gentleman, and he was cited to appear before the Board in January, and not appearing, a trip was made to Westfield without finding the gentleman. He afterward came to my office and said he was a graduate of a Cuban College, and promised to register the succeeding week; and not doing so, another note was sent, promising, if not registered by the succeeding Saturday, he would certainly be arrested on that day. Dr. Brown subsequently wrote me he had registered, the college being the Havana Medical and Dental, of Havana. I wrote to Havana and received a reply that there was such a college; but with two or three letters sent subsequently could get no reply as to whether this particular Aguirrea had graduated. A trip was made to Bergen county in reference to a locksmith who was practicing dentistry. He has discontinued. Several letters were sent to an herb doctor in Paterson who was practicing dentistry, who also promised to discontinue, and I suppose is now attending college, as he wrote me that he so intended. Attention was given to a man practicing at Moncey, who has since discontinued. Likewise to a gentleman at Branchville, who has since left the State.

F. W. Morford, who came before the Board two seasons ago, and after appearing before the Board for examination, was informed he had better return and come up in January, on account of his utter inefficiency, and who has not since appeared before the Board, has been watched unceasingly, and so far it has not been possible to obtain any case against him. He is employed by another dentist at Red Bank, N. J. L. W. Sutton, of Newton, has received notices for two years to appear before the Board but so far has failed of an appearance. Attention was given to a dentist called Christy, of Jersey City, practicing there and not registered. It was found that he was a graduate of a Pennsylvania College, and he has since registered in the Clerk's office, of Hudson county. A German mechanical dentist, named Kull, commenced practice last January in Newark, and not being registered, a visit was paid and it was necessary to call in the aid of an interpreter. I succeeded in having him register under a German diploma. Oscar Pozzesi, who has taken the office of W. Weigand in Newark, was notified and he appears before the Board to-day. I am inclined to think he knew nothing concerning the law. J. Mark Osler, of Ocean Grove, who practices in that sea-shore town, was notified and has appeared before the Board, and I hear passed a most satisfactory examination. A. S. Burton, of Asbury Park, was notified and has also appeared before the Board. Several complaints are now under investigation, and your Prosecutor will give them all due attention, and do strict justice for both sides.

CHAS. A. MEEKER,
*Prosecutor.*

DR. G. CARLETON BROWN, of the Committee on Revision and Printing of the Constitution and By-Laws, reported as follows:

MR. PRESIDENT—Your Committee would report that we have finished our work, having had the revised Constitution and By-Laws printed, and they are here ready for distribution. The officers' books are not ready to-day, but will be in a few days. The committee ask to be discharged.

On motion, the report was accepted and the committee discharged.

The Secretary read a communication from Dr. S. H. McNaughton, tendering his resignation as a member of the Society.

On motion, the resignation of Dr. McNaughton was accepted.

The Secretary read a communication from Dr. J. C. Hanks, tendering his resignation as a member of the Society.

On motion, the resignation of Dr. Hanks was accepted.

DR. G. CARLETON BROWN—I move that the vote on the acceptance of Dr. Hanks' resignation be reconsidered, as Dr. Hanks owes his dues for this year, and therefore cannot resign. If his attention is called to it no doubt it will be made all right.

DR. OSMUN—What time did you receive that notice of resignation?

DR. MEEKER (Secretary)—The twenty-sixth of September, 1882.

DR. G. CARLETON BROWN—That was after the meeting last year; we have but one meeting a year, and his dues have not been rescinded yet.

DR. CLARKE—Does Dr. Hanks owe more than two dollars in dues now?

DR. GEO. C. BROWN—No, sir.

DR. CLARKE—When a man becomes a member of this organization he pays his initiation fee and one year's dues; that carries him over from the Convention that elects him to the next year's Convention. If Dr. Hanks paid no dues last July he owes a year's dues, but if he paid his regular dues last July he does not owe anything.

THE PRESIDENT—Does Dr. Brown ask that motion to reconsider?

DR. G. CARLETON BROWN—Yes, sir.

DR. GEO. C. BROWN—I read in Article V of the By-Laws: "The initiation fee shall be five dollars, including certificate of membership; the dues shall be two dollars, payable at the annual meeting." The first year it is five dollars, which includes the initiation fee and the certificate of membership; one year from that day the member owes the Society two dollars for the intervening year's dues. That has been my understanding, and the course I have pursued ever since I have been Treasurer. I think the fee was originally five dollars for the certificate of membership only, but it was changed several years ago to include all; the initiation fee was made five dollars, to include the certificate of membership, and two dollars a year was charged after that. I have just handed the Secretary a letter which I received from Dr. E. F. Hanks, inclosing two dollars, his dues for the present year, and tendering his resignation as a member of the Society.

DR. CLARKE—Do I understand the Treasurer to say that at the last year's session Dr. J. C. Hanks did not pay his dues?

DR. GEO. C. BROWN—I did not say anything of the kind. I said that at the present session he owes two dollars, his dues from last year to this year. His resignation could not be acted upon until this session, as it was received in the interim between last year's session and the present session, and he is just as much a member on the Treasurer's books as any of you, until his resignation has been acted upon and accepted.

DR. CLARKE—I hold different. His resignation is here to be acted upon at the first meeting, and I hold that if it is acted upon now and accepted he owes this Society nothing. You could not act upon it before this meeting. I hold that if he paid his dues last year he is not a member of this Society after tendering his resignation and you have accepted it; if he paid no dues last year he ceases to be a member of this Society by being dropped from the roll.

THE PRESIDENT—No, sir; he must be two years in arrears to be dropped.

DR. CLARKE—Last year and this year are two years.

DR. OSMUN—If Dr. Hanks had sent in his resignation the day after the meeting adjourned last year he would, according to Dr. Brown, owe this Society two dollars. It seems to me that when he sent in that resignation he ceased to be a member of the Society, by his own voice in the matter, the moment he sent in that resignation, and you cannot charge him with a year's dues; all you can charge him for is the two or three months that elapsed from the time the session adjourned last year until the time he sent in his resignation; you cannot hold him for the whole year.

DR. GEO. C. BROWN—I always supposed that it took two to make a bargain, and I think it does in this case. If a gentleman presents his application to this Society to become a member of it, the mere fact of his presenting the petition does not make him a member; his petition has to be acted upon by the Society; and he can no more sever his membership from the Society, after he has been elected, unless he violates the Constitution and By-Laws, than he can make himself a member: he must have the action of the Society to get out of it honorably, just as he must have the vote of the Society to get into it; therefore I hold that that proposition to resign from this Society, which he tendered to the Secretary, is null and void until it has been acted upon by this Society at its regular session.

PRESIDENT PALMER called Vice-President Bunting to the chair, and himself took the floor.

DR. PALMER—I think Dr. Clarke is somewhat mistaken in regard to this matter. The Society can take no action upon anything of this kind except at the regular annual session, and any one resigning from the Society must tender his resignation in the same manner in which he makes his application for membership. At each annual meeting the dues for the past year are due and payable; as, for instance, to-day those who have not paid at this session owe this Society two dollars. No matter if the resignation of Dr. Hanks was received by the Secretary on the first of Septembar last, it could not be accepted until now, because there is no one authorized to accept a resignation for the Society; it is only to-day, or some

day during this session, that we can act upon such a resignation, and the gentleman's dues up to this meeting are due to the Society. His brother virtually acknowledges the force of that in tendering his dues with his resignation. We could not accept his resignation last year because it was not tendered at the annual meeting.

DR. CLARKE—I hold that when we pay our dues to-day in the regular order of business, we pay our two dollars for the coming year, and not for the past year. When a man joins this Society he pays five dollars for his initiation fee and membership certificate, and there is nothing said about dues; and the next year when he is assessed two dollars it is his dues for that year, and not for the past year.

DR. G. CARLETON BROWN—Article V says, "The initiation fee shall be five dollars, including certificate of membership. The dues shall be two dollars, payable at the annual meeting." If a man is elected this year he pays five dollars only; he does not pay any two dollars for the coming year's dues, and at the next annual meeting he pays two dollars dues for the past year. We do not require the dues in advance.

DR. LEVY—Mr. President, I would like to know what was the date of that resignation.

DR. MEEKER—September 26, 1882.

DR. LEVY—I read from Article VI, Section 1: "Any member shall have the privilege of resigning upon application being made in writing, provided all arrears due from him to the Society have been paid, except in case of charges preferred against him." Now, supposing that he has not paid his last year's dues, can we charge him for the full year when he has only been in the Society half a year or less? Can we do that, even if the dues are not paid in advance?

DR. G. CARLETON BROWN—I want to read the bill that was sent to Dr. Hanks.

DR. LEVY—I rise to a point of order. Dr. Brown has spoken twice on the question.

DR. OSMUN—I move that Dr. Brown be allowed to continue.

THE PRESIDENT—If there is no objection Dr. Brown will proceed.

DR. G. CARLETON BROWN read the form of bill that was sent to Dr. Hanks.

DR. GEO. C. BROWN—I never have understood that members have ever paid one dollar of dues in advance. The bills are certainly not made out in advance. Last year Dr. Hanks paid up to 1882, but his resignation was not presented nor accepted at that time.

DR. SCARBOROUGH—I think we can settle this matter by going back to the origin of the Society. When our organization was first started dues were demanded, and that was to defray the running expenses of the Society for that year, and the next year we paid our dues for the then ensuing year, and so on from year to year. When we paid our first dues there was no past year to pay for, and it must have been for the coming year, and if dues have been paid regularly ever since there is no past year to pay for now; and it seems to me that if Dr. Hanks paid his regular dues last year he

has paid his dues up to this day, and you could not collect any dues from him when his resignation is before you.

DR. WATKINS—I do not often agree with Dr. Clarke, but I must say that I agree with him now. I think the trouble has arisen through the error of making out the bills in advance. When I joined the Society I paid my two dollars for that session; I did not pay it for the year I did not attend the meetings, and before I knew there was a State Society. I have paid at every session since then, and I expect to pay to-day for this year's session. I paid for the last year's session, and I am not in debt to the Society; if I should send in my resignation to-day I do not think I owe the Society two dollars.

DR. LEVY—I would like to read Section 1 of Article II, which is as follows: "Candidates for membership may be proposed at the regular meetings, application for the same being made in writing, endorsed by two members of the Society, and accompanied by the initiation fee *and one year's dues.* The name of the candidate shall then be referred to the Board of Examiners, whose report shall be acted upon at the same meeting."

DR. G. CARLETON BROWN—I think this thing ought to be settled, because it is a point that may come up again at any time. If these bills are not correct as they have always been made out, it ought to be understood and the error corrected. According to this bill you all owe two dollars, and that pays you up to this session. If that is wrong and the dues are paid in advance, then the bills ought to read from 1883 to 1884. According to the reading of the bills, and the idea that has been followed, you are not paid up to to-day until you have paid two dollars at this session; but if Dr. Clarke's idea is correct, Dr. E. F. Hanks ought to have returned to him the dues he has sent in for this year.

DR. CLARKE—I think the proper way to make out the bills for this session would be simply for 1883, and not for 1882 and 1883, or 1883 and 1884.

DR. BROWN'S motion to reconsider the resolution accepting the resignation of Dr. J. C. Hanks was here voted upon, and was declared to be lost.

PRESIDENT PALMER resumed the chair.

DR. CLARKE—I rise to make a motion, and before making it I would like to ask whether Dr. E. F. Hanks paid his dues last year.

DR. GEO. C. BROWN—He did. I have handed his resignation to the Secretary, and, under the ruling that has been made, I will return his two dollars that accompanied it.

DR. MEEKER—This is hardly a resignation legally. I will read Dr. Hanks' letter. [Secretary reads document.]

DR. CLARKE—From the tenor of that letter he has evidently got the same impression that I have held, but then I suppose that when he received his bill he saw "1882 and 1883" on it, and did not know whether he was right or wrong, and he would rather pay two dollars than run the risk of having his name brought up here as a delinquent. Mr. President, I move that the resignation of Dr. E. F.

Hanks be accepted, and the money which accompanied his resignation returned to him.

THE PRESIDENT—That is out of order. Dr. Hanks' resignation has not been made yet.

DR. CLARKE—Then I withdraw my motion.

DR. G. CARLETON BROWN—The By-Laws provide that the initiation fee shall be five dollars, including certificate of membership; that clause does not say anything about one year's dues. The next clause provides that the dues shall be two dollars. Therefore, when a member is elected he has got to pay seven dollars the first year. We are now all behind two dollars, and we have got to pay four dollars this year, if it is held that the dues are payable in advance.

THE PRESIDENT—There was a special resolution passed some years ago that a man on becoming a member should pay five dollars for his initiation fee and certificate of membership; that five dollars paid for the whole thing, but we are now working under the new Constitution and By-Laws, and their provisions must be observed.

DR. CLARKE—That is right.

On motion of DR. MEEKER, the privileges of the floor were extended to the visiting members of the profession present. Dr. Evans, of Washington; Dr. Day, of New York; and Dr. Newell, of New Brunswick, were introduced.

On motion of DR. MEEKER, it was ordered that the President's address be the first paper read after roll-call at the afternoon session this day.

DR. CLARKE—I wish to offer a resolution, so as to settle definitely this disputed point of dues.

*Resolved*, That hereafter the fee of five dollars, to be paid when a member is elected, shall include the first year's dues and the membership certificate.

DR. CLARKE'S resolution was passed.

THE PRESIDENT—The Chairman of the Executive Committee directs that the election of officers shall take place at nine o'clock this evening, and that during the evening session the selection of the next place of meeting shall also be made. These announcements are made in compliance with the requirements of the new Constitution and By-Laws.

On motion of DR. LEVY, a recess was taken until two o'clock P. M.

## AFTERNOON SESSION.

PRESIDENT PALMER in the chair. The roll was called by the Secretary.

THE PRESIDENT read his annual address.

## THE PRESIDENT'S ANNUAL ADDRESS.

*Gentlemen of the New Jersey State Dental Society:*

It is with pleasure that I greet you this morning, on the occasion of our thirteenth annual assembling together as a Society devoted to the advancement of dental science. For the first time since the session of 1877 we have changed our place of meeting. It remains to be seen whether this change shall prove to be a beneficial one or not. Let us all unite by personal effort to make this meeting such a grand success that the change shall be pronounced eminently beneficial.

Early last August, application was made by two or three gentlemen for the privilege of representing this State at one of the Baltimore colleges, on what is known as a beneficiary certificate. After due consultation with the Board of Examiners, the appointment was given to Joseph W. Curtis, who entered the dental department of the University of Maryland, and subsequently graduated with honor. He has, since graduation, entered upon the practice of dentistry at Hackettstown in this State. Elwood Brown, who some years ago passed a successful examination before the Board, was then offered the appointment to the Baltimore College of Dental Surgery, but he neglected to go until so late that he concluded to wait another year, and will probably ask the Board this year for the privilege. In this connection I would say that both Baltimore colleges admit one student from each State on what are known as beneficiary certificates—one-half the regular tuition fees—on the recommendation of the State Society, or, in the interim, of the President. I would suggest that it be made the rule of this Society that the President must have the concurrence of a majority of the Examining Board in the appointment, and in case there are two or more candidates, to subject them to a competitive examination, at the discretion of the Board, provided those admitted to this examination shall be *bona fide* representatives of this State.

In August, I also received the resignation of an old and valued member of our Society, Dr. E. F. Hanks, which is in the Secretary's hands and will come up for action in due time.

January 11, 1883, the officers met at New Brunswick and transacted the necessary business of the Society. Dr. Thomas L. Cook passed a successful examination and was granted his license. A bill authorizing this Society to confer the degree of M. D. S. was urged before the last Legislature of this State by your committee appointed

for that purpose at the last session of this Society. The report of that committee will be complete and needs nothing from me.

While our membership is in a flourishing condition, and everything well with us, while we have no grievous loss to mourn from among our own members, we must pause a moment to speak a word concerning the loss of him whom the entire profession in the East had learned to think of whenever the electric mallet was mentioned, and whom many had learned to love. You all know that I refer to Dr. Marshall B. Webb, of Lancaster, Pa. He was an ardent, enthusiastic young man, stricken down in the prime of life, but not until he had accomplished much good in his chosen and beloved calling. His is but another name added to that list of those who have early made their mark in our profession, to be soon called away. It would seem fitting that we as a Society should record upon our minutes, or otherwise, some resolution of respect for his memory.

At our January meeting Dr. Hayhurst, of the Examining Board, was appointed a committee of one to attend a meeting of representatives of the various State Boards to be held at Lexington, Ky., February 20, 1883. I believe that Dr. Hayhurst did not go, on account of the floods which at that time seriously interfered with Western travel. But the meeting was held, attended by a few, and an adjourned meeting will be held at Niagara Falls this coming month, during the meeting of the American Dental Association. The object is one which must commend itself to the mind of every one interested in the subjects of dental education, legislation and advancement. Briefly stated, it is desirous "to secure unity of effort and systematic action relative to all questions touching the manner and standard of examinations, the uniformity of the law's action in the several States in which dental laws exist, boards of examiners and dental colleges," etc. This movement has commended itself to me from the first, and I sincerely trust that our State and Board may be well represented at this coming meeting. Our State was among the first to enact dental laws, and has ever been among the leaders in anything looking to the advancement of our profession, and we cannot now afford to lag behind.

In conclusion, gentlemen, let us remember in all our discussions that we are all differently constituted, and cannot all see things alike, and that tolerance and forbearance in all matters of difference will go a great way toward making this meeting not only a grand success but a meeting noted for its harmony and good will.

On motion of DR. MEEKER the President's address was referred to the Executive Committee.

THE PRESIDENT—The next thing in order is the payment of dues and initiation fees. It is a rule of our Constitution that no one shall be allowed to vote who is in arrears of dues.

THE SECRETARY read the following applications for membership: Alfred J. Wright, of Montclair—sponsors, Dr. C. S. Stockton and Dr. S. C. G. Watkins; Dr. L. S. Ayres, of Rahway—sponsors, Dr. C. A. Meeker and Dr. J. Hayhurst; Dr. J. L. Crater, of Hackettstown—sponsors, Dr. J. A. Osmun and Dr. C. S. Stockton; Dr. S.

B. Johnson, of Dover—sponsors, Dr. James G. Palmer and Dr. G. Carleton Brown; William E. Linsted, of New Brunswick—sponsors, Dr. F. A. Levy and Dr. C. A. Meeker. For honorary membership, Dr. C. F. W. Bodecker, of New York—sponsors, Dr. James G. Palmer and Dr. C. A. Meeker.

On motion of DR. LEVY, the foregoing nominations were referred to the Board of Examiners.

DR. MEEKER—I have a communication from Dr. Henry S. Chase, of St. Louis, who was expected to be here to read a paper, stating that he is prevented from being present by unfortunate engagements. Dr. Chase has sent his paper, and I have placed it in the hands of Dr. Meloney to read, which I hope will meet with your approval.

On motion, it was ordered that Dr. Chase's paper be accepted, and that it be read in connection with the papers of Drs. Brown and Hayhurst, which are on the same subject; Dr. Chase's paper to be read first, Dr. Brown's next, and Dr. Hayhurst's last.

THE PRESIDENT—I would like to call the attention of the Society to the new Constitution and By-Laws, and suggest that each member should read them carefully during the afternoon, so as to become familiar with the changes that have been made. Among other things you will see that the second Section of Article IV says no member shall withdraw from the room during the sessions without special permission from the chair. This does not, of course, apply to our visiting friends, but members of the Association will comply with the rule. Not that the chair cares anything about it, but the Constitution must be obeyed. We have a great many visiting members of the profession with us to-day, which is somewhat unusual on the first day of our meeting, and is certainly a very gratifying thing to all the officers of the Society. I would suggest that the visitors present be formally introduced by their friends to the Society, not only that we may know them and show a proper regard for their presence, but as an accommodation to the Secretary and the stenographer, who have to keep a record of the proceedings.

The following named gentlemen were then formally introduced: Dr. C. F. W. Bodecker, Dr. A. L. Northrop and Dr. Fred. Day, of New York; Dr. E. Slegel, of Readington; Dr. Evans, of Washington; Dr. Shaw, of Trenton; Dr. Waters of Baltimore; Dr. Gilbert, of Pottsville, Pa., and Dr. W. H. Atkinson, of New York.

The Board of Examiners reported favorably upon the applications for membership of Alfred J. Wright, William E. Linsted, Louis A. Ayres, J. L. Crater, S. B. Johnson, and C. F. W. Bodecker. On motion the Secretary was authorized to cast the ballot for the gentlemen named, and they were declared duly elected to membership.

DR. HAYHURST asked that the report of the Examining Board be postponed until the evening session. Granted.

DR. STOCKTON—Mr. President and gentlemen, you are all more or less familiar with the journal called the *Independent Practitioner*, which has been a joining together of medical and dental affairs, and has been a representative, more or less, of dental instrument makers and dental goods houses. I wish to call your attention to the fact

that this *Independent Practitioner* will be in the future edited by Dr. Barrett, of Buffalo, than whom perhaps there is no one better qualified to edit a journal of that character, and that it will be under the auspices of a number of gentlemen in New York, who are entirely independent of dental houses and dental goods dealers. We are under obligation, I know, to dental houses for the manner in which they have favored and assisted dental societies, and it may be that we would never have attained the position we have without their assistance, but the time has arrived when we want an independent dental journal, and I can assure you, from my close personal acquaintance with Dr. Barrett and my knowledge of the gentlemen who are associated with him or connected with this journal, that we will have in the *Independent Practitioner* all that we desire in an independent journal. I therefore take pleasure in calling your attention to it, and I hope every member of this Society will subscribe for it in order to encourage this new departure in independent journalism, as well as for their own benefit. I have a number of copies here for free distribution. I have a *carte blanche* from Dr. Barrett to receive subscriptions, and if any gentleman wishes to subscribe, after he has inspected a copy, I shall be very glad to receive his subscription. Furthermore, I will state that the proceedings of this Society will be published almost entire in this journal, and it becomes us if we want a copy of those proceedings, to subscribe for the journal that has the enterprise to print them. I should also state that the medical department has been entirely eliminated from the journal, and that it is now a dental book exclusively, except so far as medicine pertains to dentistry.

THE PRESIDENT—I desire to add a matter of my own knowledge to what Dr. Stockton has said, which is, that hereafter the proceedings of the regular monthly meetings of the Central Dental Association of Northern New Jersey will be published in the *Independent Practitioner*, and that may possibly make the journal more desirable to the members of this Society at least.

Dr. J. A. Robinson, of Jackson, Michigan, was introduced to the Society by Dr. Stockton.

A paper by Dr. Henry S. Chase, of St. Louis, on the subject of Filling Teeth, was read by Dr. C. W. MELONEY.

## FILLING TEETH.

The patient wishes teeth filled in order to prevent further decay. To restore decayed ones to usefulness should also be the object and endeavor of the dentist. If the cavity of decay could be filled with the same substance as the tooth itself, and the plug made as hard as the natural tooth, and as indestructible, and as impervious—all this being as permanent as the tooth itself—why then the ideal operation would be performed. In our present state of knowledge we fall far short of this.

How do we fail? In leaky plugs; in discolored plugs; in disintegrating plugs.

As a rule, gold *must* make leaky plugs.

As a rule, amalgams *do* make leaky plugs.

As a rule, gutta-percha makes leaky plugs.

A few amalgams make water-tight plugs. The oxy-phosphates of zinc and the oxy-chlorides of zinc make tight fillings, as a rule. Gold is objectionable as to color; so also are amalgams and gutta-percha. The least objectionable in color are the white preparations of gutta-percha, and the so-called "bone fillings."

As a rule, gold fillings are not disintegrating; neither are amalgams. The gutta-percha preparations *do* disintegrate, and so do the bone fillings.

It is evident that we have not the ideal filling.

In the majority of cases, it is of the first importance to save the tooth from further decay, and also to make the arrest of decay as permanent as possible. To do this a water-tight plug must be made. Now, we must choose this from our various materials. We can find it in the best amalgam. If color is of the greatest importance, then we can choose white gutta percha or bone; gaining color, preservation for a short time, and by frequent renewals, preservation for very long periods. If gold color is desired by the patient, then it is the duty of the operator to let it be known that, as a rule, the filling will fail on account of decay beneath the gold, or by its side, in the course of five years or less. If white filling is desired by the patient, let it be known that the tooth will be perfectly preserved as long as the cavity walls are covered with the filling material, however thin the coating may be. Also, that the surfaces of these fillings will so fail that more of the filling material must be added in from twelve to eighteen months, as a rule. If amalgams are desired by the patient, let him know of the probability of discoloration.

It is wicked, or at any rate beneath the dignity of an honest dentist, to deceive patients in regard to the various properties of filling materials. Tell them all that you know of them; do not frighten them into a course that may insure you a larger fee.

If I have not brought forward the electrical theory here, it is because my views are already well known; and in the last ten years of experiment and discussion, I have only grown stronger in my belief that the theory is true, and that it does practically apply in the choice of filling materials. And in conclusion, I will say that the value of filling materials as to electrical compatibility is as follows, the best being named first, and then in lessening value to the last named: the oxy-chlorides of zinc; the oxy-phosphates of zinc; the gutta-perchas; tin-foil; amalgams; gold.

A leaky filling may be a very preservative filling, if its compatibility is high. Gutta-percha is an instance of this. A leaky filling may be a very preservative filling if it is oxidizable. The oxides of all the metals used in filling are preservative of dentos. Oxides of metals are in greater electrical harmony with dentos than the metals unoxidized. If gold could oxidize, it would be more preservative. A leaky plug of gold is the most destructive of all plugs.

On motion of DR. MEEKER, the thanks of the Society were accorded to Dr. Chase for sending, and Dr. Meloney for his kindness in reading the paper.

THE PRESIDENT—Dr. Brown prefers not to read his paper until to-morrow morning; therefore Dr. Hayhurst will read his, which bears upon the same subject.

DR. HAYHURST—Mr. President, I would like to explain why I asked that this paper of mine should come in earlier than it is entered on the programme. I understood that there were to be three papers on the subject of filling teeth, and as this one has reference not so much to the subject of filling teeth as to the reason or the philosophy of it, I thought the discussion of the three papers might come along in proper routine if the papers were read together; but, as the matter has turned out, perhaps it is the best way for me to read this now. It is entitled Filling Teeth and the Philosophy Thereof.

DR. HAYHURST proceeded to read his paper.

## FILLING TEETH AND THE PHILOSOPHY THEREOF.

In considering the subject which we have chosen to-day, it will be necessary to allude to that which causes so much labor, and to counteract which calls forth the most skillful manipulations of the most scientific and adroit members of our profession. I mean dental caries.

It is not my purpose just now to enter into an elaborate and detailed investigation of the causes of this disease, or into a critical analysis of the agents which work so great a harm to the human family, but merely to state, in a general way, what it is, and so far to describe it as to enable us to know the nature of the enemy with which we have to contend.

Dental caries is a breaking down of the tooth-body, occasioned by the external application of some agent inimical to the health of the tooth, or it is an inherent vice growing out of the pathological condition of the patient, operating from within outward—the former from the outside inward—devitalizing and destroying the tooth structure.

As to whether or not this agent is acid, alkaline, mechanical or parasitical, it is not my intention to inquire.

If any or all these agents are at work, then it is plain that we can, by properly routing them out of their lodgment and preventing their re-entrance, stop their devastation. But if we fail to close the door after the expulsion of the bad tenant, then it is well described in Holy Writ: "After the unclean spirit was cast out he says I will return to whence I came. And when he cometh he findeth it swept and garnished. Then he goeth and taketh with him seven other spirits more wicked than himself, and they enter in and dwell there, and the last state of that man is worse than the first."

So it is with the tooth. In our endeavor to repair and preserve, we take out all of the diseased matter, and leave the sound walls of

the cavity to receive the filliug, if properly placed, and thus prevent further destruction of healthy substance. Thus can we not see that if we do not shut the door close against the entrance of the evil, the work of destruction will go on with increased force, and thus the last stages of that tooth will be far worse than the first.

If our operation is imperfectly done, and we do not make a tight union between the substance used as a filling and the cavity, thus permitting the corroding agent to enter between the filling and the newly-exposed bony structure, the plug will assist in holding the injurious matter up to its work.

It can make no difference in the result as to whether the material out of which we propose to make the filling is hard or soft, spongy or dense, plastic or solid, if we leave the margin between the filling and the sides of the cavity so that the corrosive fluid can find a lodgment there. The trouble lies not in the material employed, but in the manner of its introduction into its place. It is an almost universally admitted fact that the fillings that most nearly accomplish the design of the manipulator are those of gold foil, properly made and introduced, and here is a point to which I wish to draw your attention. Let us examine some of the materials used, and find out if possible what are the objections to them. Gold, fine gold, is incorruptible, and for aught I know, sponge gold or plastic gold is as fine as any other. It claims to be pure, yet from most operators comes up the cry, "I cannot make good work with it—let me take as much care as possible, make it as dense as I can, put as fine a polish as I please, it goes out from under my hand to all appearances a perfect specimen of workmanship, but in a short time the patient comes back, and there is a dark appearance visible between the filling and the enamel. How comes it? What is the cause?"

The mechanical arrangement of the condensed fillings of plastic gold and amalgam are the same, the body of the filling becoming very dense. It is of a homogeneous structure, and the laws of expansion and contraction are the same in similarly constructed bodies.

What is the explanation of the defect in the plastic gold filling? The gold has retained its integrity; no change there. But there has been sufficient contraction to permit the fluids of the mouth to interpose between the gold and the bone, and hence the mischief.

If we could have the same chance for a nice observation of an amalgam filling, one as free from extraneous matter as the gold, we should find the same cause producing the same effect.

The failure to make a perfect filling is in the mechanical composition of the plug.

In the former portion of this essay I alluded to a gold filling made from gold foil. This kind of a filling is universally admitted to be the best that can be made.

What is its structure? And why should it claim the pre-eminence it has acquired? It is not, strictly speaking, a homogeneous mass, but is formed of layers or convolutions. When a mass thus formed expands or contracts, it does so in the direction of the laminæ or shreds of which it is composed, and this expansion is not a rigid

one, but one that will conform in a greater or less degree to the cavity which contains it.

Thus we have a filling that will adjust itself to its surroundings, while the solid mass expands against the walls that confine it, and pushes itself away from the tooth substance, while the laminated mass, not being so rigid, does not act with such force, either against the walls of the cavity or upon itself, as to make a well-defined space between the filling and the tooth-bone. If the theory I have endeavored to establish is correct, then we have done all we can when we have removed the obnoxious substance and replaced it with a pure and clean material, so that the enemy cannot enter to destroy and lay waste the fair heritage with which every healthy being is endowed.

I do not know whether any one has ever claimed that there was any curative property in a filling, but we are often asked if, when the tooth is properly filled, it will ever decay again. We do not promise to make the tooth better than nature had made it, but we propose to repair all damages made by disease, or at least to put it in the best condition possible to resist the progress of decay. But this does not improve the quality of the material of which the tooth is composed.

There is a class of materials of a plastic character that is extensively used among us, but as most of them are of a temporary nature I leave the subject with but this slight notice of them. Much more might be said on this interesting subject, but as it is impossible to exhaust it, I leave it, in the hope that this presentation may tend to bring out something from others.

On motion, a vote of thanks was accorded to Dr. Hayhurst for his able paper.

Dr. C. F. W. Bodecker—*Mr. President and Gentlemen:* In the paper of Dr. Chase we again have the electrical theory of dental caries advanced. This theory, I believe, has very little ground; in fact it is a settled question that the dentine, as well as the enamel, is classed among the worst conductors of electricity. If there are any manifestations of electrical action in the dentine, it is due to the moisture contained in the canaliculi. Dr. Willoughby Miller, of Berlin, who may be regarded as an authority in dental caries, has made a series of very valuable experiments in the laboratory of Prof. E. DuBois Reymond, of Berlin, wherein he has arrived at the conclusion that a piece of dentine or enamel, when dry, subjected to the test of a very delicate galvanometer, scarcely showed any deviation of the needle; but if, on the other hand, the dentine was moistened with a physiological solution of chloride of sodium, a deviation was observable. Dr. Miller found that no galvanic action exists between the tooth itself and the filling material; but if different metallic fillings were placed in the same mouth, a galvanic current from the more oxidizable (the electro positive) to the less oxidizable (the electro negative) metal is the result, as long as the surfaces of these metals remain unoxidized. This oxidation in the positive metal (amalgam or tin) fortunately does occur, and with it the

electrical current gradually is destroyed. Dr. Miller furthermore found that on the surface of every filling, and especially of gold if unevenly condensed, an electric current can be detected as long as the surface remains clean. If this is the case, a gold filling introduced by the aid of the electro-magnetic mallet would be the best that can be made with regard to electrical action, for I believe with no other mallet can we introduce gold so uniformly as with this.

Dr. Chase furthermore says, if I understand him correctly, that gold is the worst material to fill teeth with, and a permanent filling cannot be made with it. The doctor may be right if he speaks of very badly organized teeth, and when we consider the process of secondary decay from a rational standpoint, we will understand why most of the gold fillings in this class of teeth do not stand. Secondary decay, I believe, is nothing but a low grade of inflammation, mostly due to the irritation of the metallic filling. Gold, when in direct contact with the dentinal fibres, acts as a foreign body, and thus produces what is termed "eburnitis;" that is, the Tomes fibres swell, the surrounding lime salts are dissolved, and the basis-substance breaks down; and in microscopical specimens we will find that the carmine (if stained) has been taken up by the Tomes fibres very much more than in other parts of the same specimen. But in fairly organized teeth gold can be made a perfect filling every time, if you protect the living matter of the dentine by something like oxy-chloride or oxy-phosphate of zinc. With this precaution, gold is a better filling material than any other substance. If a cavity is lined with a solution of gutta-percha, then partly filled with oxy-chloride or oxy-phosphate of zinc, and a gold filling put over that, I do not believe there will be, except in rare instances, any secondary decay, always provided the gold filling has been put in water-tight.

As for the imperfection of gold fillings, I do not think there are so many imperfect ones as is claimed. Most of them are inserted pretty well, and stand pretty well under ordinary conditions. When fillings give way, the fault is more in the substance of the tooth, I think, if the edges of the filling were made perfect when inserted. We see in the mouths of some persons fillings that have been there for twenty, thirty, or forty years, many of which might be picked out with a nerve broach, and yet they remained all that time. In such cases it is decidedly not the workmanship that saved the teeth, but the density of the tooth substance.

Dr. Atkinson—*Mr. President and Brethren:* I deem it an auspicious day when we can gather one hundred and forty dentists together to talk upon subjects that have puzzled the wisest heads in physics and physiology, and have them speak with some little apprehension of what they are talking about; but when a man who has a large reputation, large experience and large imagination forgets the line between cause and effect and antecedent and sequence so far as to charge to the material he works with the imperfections of his manipulative ability, it is time he was criticised so severely as to prevent the injury he would do to young men who may be within hearing of the paper to which we have listened. It is hardly possible to get as

full a discussion of a question anywhere else as we have in our dental associations, for we are a young body and are not overlaid with false precedent and mere notions passing for scientific attainment. We have heard, in the remarks of the last speaker, something of the same old idea, that smells of the mold from whence we came, which may be the consequence of our not adequately surveying the ground, so that the listener may follow the process through which the thinker went, and thereby get his idea of the subject and understand his theory.

I must commend Brother Hayhurst's paper—perhaps his Quaker blood explains that—but he should understand that the power is not the machine, but is that which operates the machine. If there is any analogy between a case of secondary decay in a tooth and the individual out of whom the evil spirits were driven, it would not be attributable to the destruction of the evil spirits, but the larger territory that the new comers would have to act upon. And he must understand that when we say *spirit*, we do not mean an invisible figment, but a concentration of power in an awakened presence, holding within it a purpose. All this trouble about understanding what decay is has come from invariably attributing it to the seat of the activity rather than to the activity itself. And if it comes down to saying whether we really know what decay is, or that we do not know, it depends upon our definition of the term decay. If we follow the term back to its origin, we find that it comes from the Latin *de*, down, and *cado*, I fall; and then we do know what it is. It is a falling apart of the elements that have been built up, whether it be in the form of enamel, dentine, muscle, nerve, or connective tissue fibre. I rejoice that the day has come when we can see with something of the inspiration of John Bell, a prescience which they tried to laugh him out of, but which has become definitely proved by many individuals who have had the patience to examine the process of the breaking down of the dentine, that there is an abscess in the dentine, a retrogressive metamorphosis of the dentine, without any immediate connection with the cavity of the mouth through broken down tissues, the enamel being entire, which proves that the process is inflammatory. And that was seen as long ago as the time of John Bell's writings. He did not have the great advantages that Brother Bodecker has had, and improved, under such fine instruction as is obtainable in Carl Heitzmann's laboratory, and he failed to catch the mental connection between that fact and what follows. But now it is revealed to us that the destruction of tissue has to follow the same law that governed its building up, by a reversal of the action. You see now why I have pleaded with you to study histology, to study the making of your bodies, the germs of the teeth and the manner in which they are built up. If we would spend more time in the study of histology and in getting at the principles of tissue development, we would be better men; and when I say *men*, I say the highest I can speak. Some will say a man is a fine gentleman, or he is a Christian gentleman, or he is a fine Catholic, or a fine Jew, a fine this or a fine that, but when you say he is a perfect *man*, you have included the whole of them. A man who is in possession of all

his powers and is free from the narrow isms of the day, is above them all. In order to erect a building you must have a type of it, a conception somewhere of the superstructure, before you commence, so that you can say it is up to or is deficient in the demands of the type. So in the building of a man; see that your children are not deficient in the demands of the type; and if their teeth are soundly organized they can defy everything in the shape of decay, except through mechanical violence or such strong chemical agents as would disintegrate any part of the body. The seat of the inflammatory action, of which Dr. Bodecker has spoken, is in the dentine, and that inflammatory action is nothing else than a return of the tissues to their embryonic condition. God bless John Hunter, who by inspiration said, over one hundred years ago, that inflammation was no other than a return of the tissues to their embryonic condition.

One thing that Dr. Bodecker has said may make you stumble. He said the dentinal fibrillæ swell. They cannot swell unless they have space to swell in. His statement is true, but not sufficiently complete, by reason of his ignoring the solution of the lime salts, which permits the swelling, which is the first step in the retrograde metamorphosis. The lime salts are first dissolved, leaving the animal basis-substance, or proteinaceous matter, and then, from the greater activity of the nutrient action in the dentinal fibres, they encroach upon the basis-substance of the dentine, which is now in a proteinaceous condition. Then what is the result? Why, that which we considered a mineral body before has now become changed into a higher grade of nutrient activity, and holds now an affinity for aniline and salts of nitrate of silver, etc., which are capable of coloring the living tissue, and by which the microscopist detects the difference between the organic and the inorganic substance.

I have here taken you into a field that you are probably not familiar with, but haven't I done it in a sweet and quiet way? By engaging your interest without awakening antagonism, we become possessed of a knowledge that shall make us efficient and fraternal in all our works, in which we may accomplish the great good of reversing the old method of teaching and practice, which resulted in doing mischief by rule and good by chance, and lead to doing good by rule and mischief by chance; and we may thus be enabled to speak forth words of truth and soberness in our daily calling and make that calling divine, because productive of the healing of the nations. And why begin with the teeth to heal the nations? It is because that is the point of mergence of the laws of nutrient activity in the three kingdoms—crystallization in the enamel, cellulation in the dentine and corpusculation in the pulp. I might go beyond this, and speak of the rebuilding of the tissues after they have been reduced by disease, any stage of which may be incomplete, either in the enamel, the dentine or the pulp tissue, and capable of being detected by the competent microscopist and histologist. In cases where the rebuilding has been permitted to express the demands of the type, there is no perceptible difference between the reproduced and the original structure. These are words of truth and soberness,

the result of personal observations, investigation and experience. Miller has worked well. He has shown that it is the water that is the conductor of this mode of motion that we call electricity, and not the dry dentine or the dry enamel. And here I am a little like the man in his dream, who said, "all of which I saw and part of which I was, myself creating what I saw." I was part and parcel of that same investigation in Heitzmann's laboratory, and witnessed the beautiful operation by which was revealed the living protoplasmic strings in the enamel. As long as the enamel is normal it has about two per cent. of animal matter in it, and that contains hardly enough of the water element to induce much conduction; but some very hypersensitive people, whose teeth probably have larger protoplasmic strings than those of better organization, will have the enamel of their teeth set on edge, as the saying is, by taking acids in the mouth. That is in the direction of the same process of dissolving the lime salts, whereby you discover an animal substance in what was before thought to be a mineral substance. And here is manifested that very condition of electricity which is only one of the modes of motion passing through that substance. And how do you cure teeth that are so affected by acids? Simply apply a little soap or soda, and the trouble is cured in an instant. How is that done? You have not restored all the lime salts that the acid has removed; but you have restored that finer thing that is necessary to normal sensibility, the harmony of the nutrient currents. That is too fine a thing for the general apprehension to catch, it is too *spirituelle* for the comprehension of the materialist and physicist, although he enjoys the comfort induced equal to the wildest spiritualist. You will have to pray over him and warm him up, before you can make him appreciate such a thing, and I don't know but you will have to beget him first.

DR. WATKINS—I think Dr. Hayhurst ought to be complimented on his paper. I think it is the best paper I ever heard him read.

DR. OSMUN—I feel somewhat embarrassed in taking the floor to say anything regarding the papers, after such able gentlemen as Dr. Atkinson and Dr. Bodecker have discussed them; nevertheless I should dislike to see the two papers passed without saying a word upon them. I think such papers as that of Dr. Chase are capable of doing a great deal of harm. I grant that Dr. Chase is an able man and an earnest seeker after truth, and that he intends to do good, but I think that if there is anything that has been detrimental to the young members of the profession it is this everlasting cry of plastic filling. When men like Professor Flagg, Dr. Chase and Dr. Palmer, of Syracuse, defend such a system as that, the young men of the profession are very apt to follow in their footsteps and serve these plastic idols, instead of their golden gods. They are readily induced to take up plastic fillings because they are worked a little easier and more comfortably, and do not take quite so much time; hence I think such papers are likely to do a great deal of harm. When I first read Dr. Foster Flagg's book, I was very much interested in it, and when I read Dr. Chase's articles I thought, here is something that is going to fill the bill, this will enable me to

serve the people quicker and more cheaply, and do a greater amount of good than I could with gold, which requires hours and hours of time to make a good operation. I saw in that plastic material something that would enable me to do a great deal more work, and so serve a greater number of people. But, gentlemen, as I stand here to-day, I think it is one of the greatest curses that ever came into the dental ranks, and has done more to injure people than anything else. There are many men and women going about suffering to-day simply because they were so unfortunate as to fall under that scythe of plastic filling. I have gone back to the old way; and I tell you that gold foil manipulated with care, gold foil impacked with careful manipulative ability, and conscientiously between man and man, is the only filling which will stand by you through thick and thin; is not that so, Dr. Atkinson?

DR. ATKINSON—With one amendment. Gold is a conductor of thermal and electrical currents; but if you will put a little oxy-phosphate, oxy-chloride, or gutta-percha over the dentine before you introduce your gold, then, with that amendment, I say amen to every word.

DR. OSMUN—I accept the amendment. And I protest in the name of every young dentist in the profession, now or who may come into it hereafter, against such teachings as that, which are simply damnable.

DR. WATKINS—Dr. Atkinson says you should partly fill the tooth with gutta-percha, and pack gold over that. I did not know Dr. Atkinson used gutta-percha under gold fillings. I have used gutta-percha and have seen it used, packed in solid, with gold on top of it, and it split the tooth right open. I have seen other cases where pieces would break off the side of a tooth so filled. I would like to hear something on that point.

DR. G. CARLETON BROWN—I remember hearing a few years ago at the Pennsylvania College, Dr. Truman, I think it was, say that he did not believe a tooth was ever saved that was capped with gutta-percha. He illustrated his idea with a great many cases, and many persons agreed with him. Since then there has been another revolution, I believe, and some have gone back to gutta-percha.

DR. FOWLER—My experience is that a gold filling, well put in, is the filling of all fillings. I have used plastic fillings with good success in their place, but of all fillings gold, when properly put in, is the best.

DR. LOUIS A. READING—I take part in the discussion under considerable difficulty, as my friend the Demosthenes of the profession has preceded me. I remember that the first time I made my appearance before the Odontographic Society, Dr. Atkinson took occasion to extinguish me. I was a boy of eighteen then, and I made some remarks on the subject of amalgam, in which, being a young man, I was interested.

In reference to gutta-percha and phosphates, used as non-conductors under metallic fillings, I have had no experience, except with the phosphates. I have used the phosphates under gold fillings with wonderful success, by making good anchorages, not only up

near the free margin of the dentine, but also making insignificant retainers in the phosphates. I do not mean to make retaining-points in the phosphates, but simply insignificant retainers, thus giving your main retainers a chance to build down over the phosphates. I would like to hear from some of the gentlemen upon the subject of phosphates under cohesive gold. I am an enthusiast, at present, on the subject of cohesive gold. I have mastered cohesive gold when I could not master soft gold. I would like to hear from my friend Dr. Dibble on the subject of soft foil, and from some of the younger members of the profession on the subject of cohesive gold, and in reference to the use of non-conducting materials under gold.

DR. J. A. WOODWARD—Some time ago my attention was drawn to some reported experience in relation to the bursting or forcing away of the crowns of teeth filled with gutta-percha and covered with some unyielding material, and I was led to make the following experiment: Samples of three of the standard makes of gutta-percha were packed into six glass tubes. One filling of each make was then tested, and found to leak, as usual. The other three tubes and fillings were placed in water at the ordinary temperature, for three days, and then tested, and were found not to leak. This result is due to the expansion of gutta-percha under moisture. When a large mass of gutta-percha is packed into a cavity and covered with any filling which may confine it, the expansion of the gutta-percha from heat and moisture undoubtedly exerts very considerable force in all directions. Should the tooth be a frail one, slight external force may cause a fracture, or should the pulp be closely encroached upon, pulp irritation may follow from the pressure.

DR. M. L. RHEIN—In reference to the gentleman's inquiries in regard to covering the bottom of cavities with oxy-phosphate and then packing over this with gold, I would say this, that I have followed that plan of procedure during the past three and a half years, and I have not found a single case in which I had cause to regret it. My plan has been about the same as that described, that is, not to make retaining points in the oxy-phosphate, but simply starting points, and if any anchorage is needed other than the shape of the cavity affords, make it near the free margin of the dentine and enamel. Besides that form of capping we find a large number of teeth where the cavities are such as not to permit us to place in them sufficient oxy-phosphate to afford the needed protection. This is especially the case with laterals, and they are the teeth which need a non-conducting barrier the most, they being the worst teeth for gold to be placed in immediate contact with the dentine. In those teeth I obtain the greatest benefit from the use of fine silk court plaster. It can be cut in any desired shape, moistened and placed over the dentine, and the gold packed directly against this, forming a barrier which will prevent any thermal changes. I have found the use of a proper court-plaster a success in almost every case where I have used it. After the operation of restoring contour, etc., is completed, the application of cold or heat should not produce the slightest amount of sensation.

I would like to touch upon another point in the discussion, and that is the use of plastic fillings. Every one who has preceded me has decried the use of amalgams, intimating that nothing could save the teeth but gold. I believe strongly that the teeth can be better preserved through the aid of gold, cohesive gold, properly packed—as Dr. Bodecker has so beautifully explained the reason why; if packed solidly with the electro-magnetic mallet, it gives the best results, because, according to the latest experiments of Dr. Miller, of Berlin, no electrical affinity exists in a solidly packed gold filling, while a gold filling not perfectly solid responded to the electric test. All this is good as a general rule, but we should not ride the hobby of gold or no filling at all. Let a few grains of common sense be added to the accomplishments of those who follow the golden rule without deviation. A great many patients come to us with the teeth in the posterior portion of the mouth in a broken down, bad condition, and the patient will not and cannot spend either the time or the money necessary to have those teeth restored to their natural contour with gold. Must such teeth eventually be consigned to the mercies of the forceps? Is conservative dentistry merely for the wealthy? Now, I have found that the use of a proper kind of alloy, impacked in a proper manner, will save those teeth, and will not discolor the tooth structure. The best filling material I have found for that purpose is Bonwill's gold and platinum alloy. The quality of the material is one consideration, but a more important point is that the work must be done in as thorough a manner as with gold foil. In this connection remember to take up all the free mercury. The neglect of this point causes most of the failures. It is almost impossible to mix any alloy and not have some free mercury in it. Use the mallet in inserting the amalgam, and by placing tin foil under the mallet you take up all the free mercury. The utmost care should be taken to take up every particle of the excess at the margin of the filling and the enamel; and by taking that precaution no discoloration of the tooth structure will ensue. A good amalgam, worked properly, will save teeth. I do not think it preserves them as well as gold; and I think I echo the sentiments of a great many dentists when I say it is easier to insert a perfeet gold filling than to insert a good amalgam filling.

Dr. Reading—Of course, we do not come here to criticise or find fault with one another, but to learn. The gentleman who preceded me spoke favorably of court-plaster as a lining for cavities, and I will say, for the benefit of the young men who heard him, that I tried court-plaster when I was a student, on the recommendation of a gentleman who forgot to say what kind of court-plaster we should use, and I made a mess of it; so I will tell you, in order that you may not do as I did. Having heard something said about the use of court-plaster in that way, I tried it by putting a piece of black court-plaster under the proximal surface of a superior incisor. About six months after that, when the patient came back, I noticed the tooth was terribly discolored. I had been buying some gold from a student. and I thought it probable that I had used an inferior article of gold, so I removed the filling. I called the attention of the

demonstrator to it, and he said: "You have used black court-plaster." I said: "Of course I have; the gentleman told us to use court-plaster, but he did not tell us what kind to use." Now, if any of you gentlemen use court-plaster in a tooth, please to use white court-plaster and not dark.

DR. HAYHURST—It is pleasant to me on every occasion, to have the compliments of my friends, and I feel grateful for their commendation now, but the discussion has, it seems to me, got a little twisted out of its legitimate direction, and the point I wished to make in the essay is nearly lost sight of. I would be very sorry, indeed, to ignore the immense amount of philosophy, and spiritualism, and metaphysics, or anything of that kind that has got into the discussion; I do not object a particle to it, but I want to call your attention to the point I desired to make. My idea in writing that essay was to make a particular point in regard to gold; not to advocate gold over any other material, that had nothing to do with it; but simply to call your attention to the manner, rather, in which gold foil will work. I do not wish to say anything against amalgam, and I do not wish to go into the philosophy of decay. I thought I ignored that, except so far as it was an evil influence of some kind that was to be kept out, and in doing so to indicate the proper method of keeping it out and the proper substances to use. Gold foil was, and I don't know but it is yet, in some shape or other, supposed to be the best material manufactured for filling that would accomplish the purpose for which the operator was working, which is to make a tight door. In examining it I looked a little at the philosophy of the matter, at the method in which that gold filling is made, and the fact that a plug made of foil is either laminated in structure or convoluted in structure, that it is not a homogeneous mass, that it is subject to expansion and contraction, and that it will expand and contract in the direction of the fibres of which it is made. An amalgam filling, or a filling made of solid plastic gold, becomes a homogeneous mass, without a laminate structure, and the expansion and contraction will be made generally in a rigid manner that forces the plug against the side of the tooth, which must give, but there is nothing to make that contract, and when the filling contracts it leaves a space. Now, I ask why we reject plastic gold? Can any of you educated men tell me why plastic gold has been discarded to such an extent as it has been? Is it not on account of the fact that it becomes a homogeneous mass, and expands in the manner and with the result I have described? There is nothing in it to give when expansion takes place, so it pushes the sides of the tooth apart, and when it contracts a cavity is left around it, through which the fluids of the mouth penetrate, and, of course, work upon the bone. Amalgam acts in the same way. Possibly some of the plastic fillings may adhere to the bone, the phosphates may adhere to the bone, and if so they make a better filling in this respect than amalgam.

DR. OSMUN—Will Dr. Hayhurst explain how a filling can expand in the direction of the laminæ of the tooth, if it is made solid, more than in any other direction?

DR. HAYHURST—I do not believe that a gold filling made of foil ever is exactly homogeneous; I believe it retains, to a greater or less extent, the marks of its structure which are made in piling one piece upon another in building it up. There are parts of the gold that you do not touch with your instrument at all. This idea is not new, or original with me. I have made inquiry of many intelligent men, and they hold that the laminate structure of a foil filling is retained, and that the expansion and contraction will be in the direction I have stated.

DR. OSMUN—In filling a molar tooth with foil, you commence at the bottom and build squarely across from side to side, and that is directly opposite to the laminate structure of the tooth, which is from the apex of the root to the crown.

DR. HAYHURST—I alluded to the laminate structure of filling, and not of the tooth.

DR. RHEIN—Dr. Hayhurst has taken entirely wrong ground on this question. There is, of course, some contraction and some expansion in all metals, but the amount of such contraction and expansion in a filling is infinitesimal, and it has no appreciable effect upon the tooth, nor upon the cavity of the tooth which it restores to its former condition. He asks why plastic gold has fallen into disuse. Because it cannot be impacted solidly, and the impossibility of getting a sufficient amount of gold into the cavity. It is for this reason that I believe in impacting the gold with the aid of the electro-magnetic mallet, because you can get more gold into the cavity, and it can be inserted in the cavity in a perfectly homogeneous and solid plug. There is no truth in these perfect gold fillings coming back leaking. The filling that will bear the closest scrutiny under the magnifying glass and defy the detection of anything imperfect at the margin of the gold and enamel, will always remain perfect, unless natural causes produce fresh destruction of the tooth substance. If the exterior of the cavity is once hermetically sealed, it will never leak. Let me see the plastic gold filling that will bear inspection under the magnifying glass, and that filling will always remain perfect.

DR. WALLACE—Dr. Bodecker spoke of lining cavities with oxy-phosphate and oxy-chloride of zinc, and I would like to ask if he allows that lining to come up to the marginal surface. I believe there are no plastic fillings that are considered insoluble. I have never found any yet, and that being the case, the phosphates would be more readily acted upon by the fluids of the mouth than gold would be, and there would be chance for decay at the marginal surface. I have tried it, and I find that difficulty, and have had failures, more particularly at the gum, or near the cementum. That is a point that ought to be looked into, and I would like to ask Dr. Bodecker whether he allows the phosphate lining to come up to the margin of the cavity or not.

DR. BODECKER—I have used oxy-chloride of zinc under gold and amalgam fillings for eight or ten years, in all cavities where I was able to, and I do not think I have seen half a dozen failures. It ought by no means extend to the margin of the cavity, for it will

surely be dissolved there. By filling up the greater bulk of a large cavity with oxy-chloride or oxy-phosphate, to a certain extent you overcome the thermal changes, and also decrease the quantity of gold or amalgam, so that very little contraction or expansion is possible. If I have a very large contour in a molar or a bicuspid to restore, I would never think of building it up altogether with gold. If possible, I would use oxy-phosphate of zinc for the bulk of the filling, except it were a central or lateral incisor, where there was not room for it. But in any cavity where a cement filling is admissible it should be used, and the edges of the cavity ought always to be smooth, and overlapped either by gold or amalgam, the cement never being allowed to reach quite up to the edge of the dentine. You must always have sufficient anchorage for your filling material in the dentine, except in the buccal and lingual walls of badly decayed bicuspids and molars. In this class of cavities I regard it sufficient to make one or two starting-points in the cervical portion, and another good anchorage in the grinding surface of the tooth, which will perfectly secure the filling, even if there is no other anchorage. But always be careful to let the gold overlap the enamel. It is better to let the edges of a gold filling be seen than to leave the margin of the cavity imperfectly protected, or fractured during the introduction of the gold. With reference to the use of gutta-percha under gold fillings, I would like to say that I never use gutta-percha in a thick layer, but always in a chloroform solution. In different cases I use a different strength. If I want to line a cavity with oxy-chloride or oxy-phosphate, I use a pretty thick solution of gutta-percha previous to the introduction of the cement, because I regard it unsafe to place either an oxy-phosphate or oxy-chloride filling in the vicinity of the pulp, directly upon the dentine. In superficial cavities, however, which are to be filled with gold or amalgam directly, the gutta-percha solution must be quite thin.

Dr. Wallace—I have used plastic fillings to some extent, but I have had better success with gold than with amalgam. I have seen two fillings, one gold and one amalgam, both put in with the most careful manipulation, subjected to a microscopic test, and the gold filling proving to be tight, while the amalgam filling was not. I have found on examining a number of fillings under the microscope, that the gold fillings were really more perfect than the amalgam fillings.

Dr. Watkins—The filling materials seem to be mixed this evening, especially gold and amalgam. A few years ago we were taught that we must not allow gold and amalgam to come in contact. Are we turning the dogs into the sheep-pen? I have been practicing a a method of partly filling cavities with amalgam and then finishing with gold, especially in the proximal surfaces of the bicuspids and molars. I place a piece of thin platinum plate around the tooth, shaping it to the contour, and bind it there with silk floss, then mix some amalgam as dry as possible, place that in the bottom of the cavity and pack it very hard, putting in considerable more than I want, so as to work all the mercury to the top, then remove a portion of it, cutting down to the hard, solid amalgam where there is

no excess of mercury; then I place the gold on that. The first few pieces are imbeded in the surface of the amalgam, and the gold is built right from that. In that way I am positive that the cervical walls of the cavity are perfect, and the lower part of the cavity nicely filled; whereas in filling with gold only we cannot always be positive; there are places that we cannot see to fill them as they should be filled; we do not know exactly where we put our gold. I think we can save teeth by this mode of filling that would not be saved by the use of gold only. This practice is not original with me.

On motion of DR. MEEKER, the paper was passed and the session adjourned until 8.15 P. M.

## EVENING SESSION.

President Palmer in the chair. The roll was called by the Secretary.

The application for membership of Edward Goertz, of Somerville —endorsed by Dr. J. G. Palmer and Dr. C. A. Meeker—was received and referred to the Board of Examiners. The Board of Examiners reported favorably upon the application.

On motion, the Secretary was instructed to cast the ballot in his favor, which was done, and Edward Goertz was declared duly elected to active membership.

The Secretary read a communication from Dr. E. F. Hanks, resigning his membership in the Society.

On motion of DR. OSMUN, the communication was received and the resignation accepted.

DR. MEEKER offered the following resolution, which was adopted:

*Resolved,* That the Society appoint Dr. C. A. Timmie, of Hoboken, as delegate from this Society to the Central Verein der Zahnarzt, held at Frankfort-on-the-Main.

DR. G. CARLETON BROWN, of the Executive Committee, reported as follows:

We would report that at the semi-annual meeting Dr. Hayhurst was appointed a delegate to attend a conference of Dental Examiners at Louisville. Dr. Hayhurst could not get there on account of the floods at that time, and we have continued him as delegate, to attend the adjourned meeting of Dental Examiners at Niagara Falls, which will take place about the same time as the meeting of the American Dental Association.

DR. OSMUN—I move that the report be accepted.

DR. MARSH asked that the speakers exercise their lungs more hereafter, as he had heard only a few words of what had been said.

DR. BROWN repeated the substance of the report of the Executive Committee for the benefit of Dr. Marsh.

DR. LEVY—I do not understand how the Executive Committee can appoint him a delegate. The delegate has to be a member of the Board of Examiners.

DR. HAYHURST—I am a member of the board now.

DR. OSMUN—Dr. Hayhurst was appointed at the semi-annual meeting, and, out of courtesey to Dr. Hayhurst, and with due regard to the interests of the Society, we continued him in that office.

DR. LEVY—I do not object to Dr. Hayhurst at all, but the appointment should be made after the Board of Examiners has been elected for the coming year.

DR. CLARKE—I understand that the motion is to continue Dr. Hayhurst as a delegate, is it not?

THE PRESIDENT—Yes, sir.

DR. CLARKE—At the last semi-annual meeting the Executive Committee appropriated a certain amount to defray the expenses of a delegate, but the Board of Examiners selected the delegate, and selected Dr. Hayhurst. It was not the Executive Committee that made the selection; the Examining Board was called together for that purpose, and they selected Dr. Hayhurst.

DR. OSMUN—I believe Dr. Clarke is correct. It came up in the regular order to-day, and we just continued him.

DR. G. CARLETON BROWN—The Examining Board appointed Dr. Hayhurst; it was referred to the Executive Committee, and they approved it.

DR. LEVY—I move it be laid on the table.

THE PRESIDENT—Do you make that motion as an amendment?

DR. LEVY—I move to lay on the table.

THE PRESIDENT—Definitely or indefinitely ?

DR. LEVY—I made no time.

The motion to lay on the table was put and lost.

THE PRESIDENT—The motion now before the house is to accept the report of the Executive Committee.

DR. MERRITT—Is this motion to accept the report, or to confirm the nomination of Dr. Hayhurst?

THE PRESIDENT—To confirm the nomination by accepting the report.

DR. CLARKE—Can they not modify the report?

THE PRESIDENT—Certainly they can.

DR. CLARKE—There is no need of that motion, so far as Dr. Hayhurst is concerned, he is already a delegate to that meeting.

THE PRESIDENT—The resolution, as it now stands, is that the report of the Executive Committee be received.

DR. CLARKE—I move that the report be referred to the Executive Committee for modification. I make that motion as an amendment.

THE PRESIDENT—The amendment is accepted, that the report be referred back to the Executive Committee for modification.

The motion to refer was then put and carried.

DR. HAYHURST, of the Examining Board, reported as follows:

The Examining Board met on January 10, 1883, and I believe there was but one candidate, Thomas L. Cook, who was duly exam-

ined, and, receiving the constitutional number of votes, he received his certificate for practice. Yesterday, the Board was called together, and, out of the several applicants, Frederick E. Reilly and J. Mark Osler were passed. There were other candidates that we have not done with yet, but that is about the sum of the labors of the Examining Board. What they have done here to-day in the way of examining applicants for membership is, I suppose, in the hands of the Secretary already.

A motion to accept the report of the Board of Examiners was made.

DR. MCNAUGHTON—I would like to know if the same questions are propounded year after year to candidates, and if the same examination is offered to the different candidates.

THE PRESIDENT—I would like to hear their answer.

DR. HAYHURST—I think it would be well to call a meeting of the Examining Board, and see what the doctor would say after going through it.

DR. MCNAUGHTON—That is not an answer to my question. If the same questions are repeated from year to year, there is no reason why one candidate could not repeat them to the others, and they would all have the answers.

DR. HAYHURST—I do not know, when I commence to examine a candidate, what I am going to ask him. It is all new.

DR. MCNAUGHTON—I think the Examining Board should report something on this point to the Society. Certainly, the Society should know what the Examining Board does.

THE PRESIDENT—The question before the house is on accepting the report of the Examining Board. If the gentleman desires the Examining Board to make such a fuller report, he can make a motion to that effect.

The motion to accept the report of the Examining Board was put and carried.

THE PRESIDENT—Under new and miscellaneous business, is there anything to be brought before the Association?

DR. OSMUN—I have a resolution to offer. As we are about to go into the election of officers, I move that five minutes be allowed for each nomination; that is, five minutes for each officer, and the same for each of the committees that are to be nominated and elected. In offering this resolution I desire to state my position. It has been the custom heretofore to rush this business a little. We go into the nomination of officers, a nomination is made and seconded, a motion to close the nominations is made and seconded and put, and that is the end of it. Now, it is no detriment to any candidate, or to any gentleman who wishes to come before the Society, to occupy a little more time, and give every one an opportunity to make such nominations as they may desire, and I hope this resolution will be carried. The members of this Society ought to have at least five minutes to see who is nominated, and if the right man is not put up, they can put up the man they prefer.

The motion was seconded.

DR. CLARKE—I have no particular objection to the resolution, but I think it is all child's play. This talk about closing the nominations don't amount to a piece of paper. You cannot compel any member to vote for the candidate named; he can vote for whom he pleases. It is done by secret ballot, and no member knows how another votes.

DR. LEVY—At a rough calculation, I make it take an hour and a half to nominate candidates, if there is only one nominated for each office; if two should be nominated, then it would take three hours.

DR. OSMUN—I will admit that it will take a longer time. It will take five minutes for the President, five minutes for the Vice-President, five minutes for the Treasurer, five minutes for the Secretary, and five minutes for each of the Standing Committees, of which there are only two to be appointed, and they are the Examining Board and the Executive Committee. My resolution proposes to give five minutes for the nomination of each one of the officers and five minutes for each one of the committees; that is, five minutes before the nomination can be closed.

THE PRESIDENT—You did not so put it.

DR. OSMUN—That is the meaning of the resolution. It has been the custom to go straight on, make a nomination, close the nominations, and proceed to ballot, and I think that procedure does injustice to the other members.

DR. CLARKE—You see the list of officers on the back of these programmes; they are a President, Vice-President, Secretary and Treasurer, making four, the Board of Examiners makes five; the Executive Committee, six, delegates to the New York State Dental Society, seven, delegates to the Southern Dental Convention, eight, delegates to the American Dental Assocaition, nine, delegates to the Massachusetts Dental Society, ten. That will take fifty minutes, allowing five minutes for each of those nominations.

DR. MCNAUGHTON—Make it two minutes instead of five.

DR. OSMUN—I accept that amendment.

DR. LEVY—Is that offered as a resolution?

THE PRESIDENT—It is offered as an amendment to the resolution.

DR. LEVY—I ask that it be reduced to writing.

THE PRESIDENT—Dr. Osmun, you will reduce that resolution to writing.

DR. CLARKE—Why should not a resolution that the nominations for officers be not closed, unless there are no more names offered, answer the purpose?

DR. OSMUN—I will accept that amendment. All I want is simply to have time enough for all who desire to make nominations.

DR. OSMUN read his resolution, when reduced to writing, as follows:

*Resolved*, That the nominations shall not be closed until every member has had an opportunity to present candidates for the position called for.

DR. MCNAUGHTON—We will never get through with the election that rate. I call for the original motion.

THE PRESIDENT—That is the original motion as amended.

DR. CLARKE—I believe the resolution is a good one and will save time. If you have the five-minute rule each member may undertake to nominate a candidate, and you would have to take some of them off, because you could not nominate them all.

DR. MCNAUGHTON—I think the whole matter is entirely out of order. It has not been amended before the whole meeting by Dr. Clarke.

DR. CLARKE—I offer that as an amendment.

THE PRESIDENT—Will Dr. Osmun accept that as an amendment to his original resolution?

DR. OSMUN—Yes, I accept that.

THE PRESIDENT—We have now this original motion as amended. Does Dr. McNaughton press his motion?

DR. MCNAUGHTON—Not if that amendment is accepted. It was not accepted before the meeting.

DR. OSMUN—Dr. Baldwin says it will take more time because it allows every person a minute. It does not allow any such thing. It simply allows each member a chance to nominate; if he makes no nomination you can proceed.

DR. BALDWIN—I would like to know how we are to understand when any person has had an opportunity. Has every one got to say, "I have had my opportunity?" How else are we going to know when they have had their opportunity?

DR. CLARKE—I think Dr. Baldwin might assume that there is a little good sense in the President's head. If the President sees that no more nominations are offered he can say the nominations are closed.

DR. WATKINS—I move that we now proceed to the nomination of a President.

THE PRESIDENT—It is not quite time yet.

DR. SCARBOROUGH—It seems to me we are wasting valuable time. I have full confidence in the members of the Society, and the officers, and I think no member wants to claim an unreasonable time to make nominations, and that a reasonable time would be given. I think that matter will regulate itself. Let us pass the resolution and go on.

DR. LEVY—Mr. President—

THE PRESIDENT—The question is called for.

DR. LEVY—I have not spoken on it. I think this resolution is a good one. I think that every man ought to have a chance to nominate some particular friend of his as a candidate for one or another of the offices. The difficulty is as to how we are going to decide when every man has had his opportunity. Are we to have a roll call, or is the President to ask whether they are all through? I do not really think it is worth while wasting time, as we have for the last fifteen minutes, and, as it is nine o'clock, I move that we proceed with the special order of business, which is the election of officers.

Cries of "Question."

THE PRESIDENT—The question is called for on this resolution.

DR. LEVY—It is nine o'clock. I set my watch by the office clock.

THE PRESIDENT—Not by the clock that this Association goes by. The Secretary will please read the resolution.

Dr. Osmun's resolution was read by the Secretary.

The ayes and nays on the question were called for, also a standing vote.

THE PRESIDENT—Neither will be done now. It is nine o'clock, and the election of officers will now proceed.

DR. CLARKE—Does the chair rule that when there is a subject before this body, we can drop that subject and go on to another?

THE PRESIDENT—That has been the decision of this body.

DR. CLARKE—I do not understand that it has.

THE PRESIDENT—Dr. Clarke will take his seat. The nomination of a President is now in order.

DR. WALLACE—I nominate Dr. Scarborough for President. He has served long and faithfully in this Society from its organization, and the southern portion of the State has not been represented in the office of President for years; therefore I would recommend the nomination and election of Dr. Scarborough to this position. I think the southern portion of the State should be represented.

DR. LEVY nominated Dr. E. A. Bunting, Sr., and DR. FOWLER nominated Dr. S. C. G. Watkins.

DR. CLARKE—I have two or three words to say. One of the gentlemen has introduced a sentiment in connection with his nomination that I hope will not be adopted by this convention, and that is the sectional one. This Association, gentlemen, is an association for the State, not for its sections, and I do not think it is proper to make a sectional issue in a matter like this. The Society is organized for the benefit of the profession, and to bring a sectional issue into the convention I do not think is proper.

DR. WATKINS declines the nomination.

THE PRESIDENT—Are there any further nominations? If not I shall declare the nominations closed. The nominations are closed. I will appoint Dr. Richards and Dr. McNaughton as tellers.

DR. MCNAUGHTON asked to be excused, and Dr. Iredell was appointed teller in his place.

DR. MCNAUGHTON desired to know if it was definitely understood how many persons present are entitled to vote.

THE SECRETARY proceeded to count the members present.

THE PRESIDENT announced that there were forty-one members present entitled to vote.

DR. WATKINS—I move that those who vote pass up, place their ballots in the hat and go back to their seats in routine.

DR. MCNAUGHTON seconded the motion.

THE PRESIDENT—In the balloting hereafter?

DR. WATKINS—Yes, sir.

DR. MEEKER—This seems to be very foolish. We are wasting an immense amount of time. There are forty-one members present, and if every member comes up that way it will disarrange the meeting, create confusion, and the members will not get their seats back again. I do not think there will be any cheating here; this is not a political ward primary.

The question was put, and the chair being in doubt, ordered a rising vote, and the resolution was lost.

DR. STOCKTON moved that the tellers pass around together, and keep audible tally as the ballots are placed in the hat.

Dr. Stockton's motion was carried.

DR. LEVY objected to the ballot as taken, and a new ballot was ordered.

THE SECRETARY announced that forty ballots had been cast, twenty-seven for Dr. Bunting and thirteen for Dr. Scarborough. Dr. Bunting was declared elected President.

DR. OSMUN moved that the vote for Dr. Bunting be made unanimous. Motion carried.

Dr. J. W. Scarborough and Dr. J. A. Osmun were nominated for Vice-President.

DR. CLARKE—One word in regard to my position. If I attend the convention next year, I shall support for President in the election then to be held, the gentleman who is elected Vice-President this evening. I consider it no more than right to do it.

DR. LEVY—Dr. Clarke has expressed the sentiment I was about to express; he has said what I wanted to say.

DR. STOCKTON—My motion in regard to conducting the balloting was carried out partially as I intended, but not entirely, and I rise to explain, in order that the tellers may do the thing according to my idea and according to the motion, which is, that one of the tellers shall pass around with the hat and the other teller shall accompany him and count as the ballots are deposited, and the Secretary shall keep that record. That is the way I have always seen it done, and that is the way to do it. If they do it at all, let them do it right.

THE PRESIDENT ordered the ballot to be taken in that way.

THE SECRETARY announced that forty-one votes had been deposited.

After counting the ballots, the SECRETARY announced twenty-eight votes for Dr. Scarborough, twelve for Dr. Osmun, and one blank; making forty-one in all.

DR. OSMUN moved that, as the blank vote would not affect the result, the election of Dr. Scarborough be made unanimous.

Dr. Osmun's motion was carried, and the election of Dr. Scarborough made unanimous.

DR. SCARBOROUGH—I desire to thank the members for the result of the last ballot, and to say that I do not wish any member voting for me for Vice-President to feel under the least obligation to vote for me for President at the next annual meeting. I do not believe in pledging ourselves a year ahead.

Dr. C. A. Meeker was nominated for Secretary.

DR. LEVY—As there seems to be no other nomination, I move that the nominations be closed. I move that the President cast the ballot for Secretary.

Dr. Levy's motion was carried. Dr. Meeker was declared elected Secretary.

Dr. Geo. C. Brown was nominated for Treasurer.

A motion that the President cast the ballot for Dr. Brown was carried.

Dr. Geo. C. Brown was declared elected Treasurer.

THE PRESIDENT—The next business in order is the nomination of a Board of Examiners.

Dr. James C. Clarke and Dr. S. C. G. Watkins were nominated.

DR. CLARKE—I thank the gentleman for his courtesy, but I am not a candidate for that position. I have held office in this Society for six or seven years, and I consider that is long enough. I am not a candidate for the position.

Drs. Levy, Meloney, Hayhurst, Carleton Brown, Barlow, Stockton and Palmer were severally nominated.

The President directed that the members select five names from the list of nominees to write on their ballots.

The ballots being collected and counted, the Secretary announced the vote as follows: Levy, 25; Watkins, 17; Palmer, 27; Meloney, 32; Hayhurst, 29; Barlow, 24; Stockton, 17; Brown, 13; Hull, 1; Osmun, 1; Adelberg, 1; Richards, 1.

Drs. C. W. Meloney, J. Hayhurst, J. G. Palmer, F. C. Barlow and F. A. Levy, having received the highest number of votes, were declared elected a Board of Examiners for the ensuing year.

DR. MEEKER—I move that we discontinue this method of going around and counting. I do not know what our visiting friends will think of a dental association that will do anything like this. I think we ought to have confidence enough in our members to believe that they will vote honestly. It looks to me as though we thought somebody was dishonest here; and the idea of asking our visiting brethren to go to the other end of the room. I do not think it is right.

Dr. Meeker's motion was carried.

THE PRESIDENT—The resolution is rescinded. You will make your nominations for members of the Executive Committee.

Drs. Carleton Brown, Sanger, Marsh, Merritt, Wallace, Baldwin, Pullin, Richards, Timmie and Adams were nominated; also Drs. Watkins and Iredell.

DR. CLARKE—*Mr. President:* Before the nominations are closed I have a nomination to make, and I hope the nomination will stand. The gentleman is an old member of the Association, one of the original members. I nominate Dr. Fowler, of Newark.

The ballots having been collected and counted, the Secretary announced the vote as follows: Carleton Brown, 22; Sanger, 17; Marsh, 10; Merritt, 17; Pullin, 2; Richards, 24; Timmie, 22; Fowler, 3; Wallace, 6; Watkins, 10; Iredell, 10; Baldwin, 3; Palmer, 1; Osmun, 1; Roberts, 1.

Adjourned until to-morrow morning.

## SECOND DAY'S SESSION.

ASBURY PARK, July 19, 1883.

President Palmer in the chair. Convention called to order at 11:15. The Secretary called the roll.

The following applications for membership were read: Thomas L. Cook, of Long Branch, proposed by Dr. Meeker and Dr. Palmer; Lyman H. Clark, of Rahway, proposed by Dr. Osmun and Dr. Clarke; William E. Truax, of Freehold, proposed by Dr. Geran and Dr. Meeker.

The applications were referred to the Board of Examiners.

Dr. Stockton introduced Dr. Carr, Dr. Hill and Dr. Francis, of New York.

VICE-PRESIDENT BUNTING takes the chair.

THE SECRETARY stated that the Examining Board had reported favorably upon the applications referred to them.

The Secretary was authorized to cast the ballot for the candidates, and Drs. Thomas L. Cook, Lyman H. Clark and William E. Truax were declared elected to membership.

PRESIDENT PALMER resumes the chair.

DR. G. CARLETON BROWN—The Executive Committee would report favorably upon the recommendations in the President's paper, and would suggest that a committee be appointed to draft resolutions of respect to the memory of Dr. Marshall H. Webb; also that a committee be appointed to draw up resolutions in regard to candidates attending college from this Society, and going before the Examining Board for a competitive examination, in case there is more than one candidate.

A motion to accept the report of the Executive Committee was carried.

THE PRESIDENT—I will appoint the committees later. Are there any other committees to report? Dr. Levy, have you any report to make of the Committee on the Legislative Bill?

DR. LEVY—We would report progress on the legislative bill.

A motion to accept the report of the Legislative Committee was carried.

DR. CLARKE—I rise to make a motion, and I do it with reluctance, but the welfare of the Association demands it. I am informed that one of the members of this Society, Dr. Alex. McKirgan, of 48 Bank street, Newark, is violating the Code of Ethics, and I move that the matter be referred to the Executive Committee with power.

Dr. Clarke's motion was carried.

DR. STOCKTON—I was engaged with my friend, Dr. Hull when the Legislative Committee made their report, and it escaped my attention; will you please repeat the report?

THE PRESIDENT—The committee reported progress, and the report was accepted.

DR. STOCKTON—If that committee is to be continued, I claim the right to have something to say on that question. I give the com-

mittee notice that I expect to leave the Convention at 4.45 this afternoon; and I think my position claims that I should have the courtesy shown me of knowing something about the work of that committee.

The following resolution, offered by Dr. Clarke, was read by the Secretary:

*Resolved*, That the Secretary edit and publish the proceedings of the past three years, 1881, 1882 and 1883, and that a committee of three be appointed to receive subscriptions to help defray the expense of such publication.

Dr. Clarke's resolution was adopted.

Dr. Meeker—In the ballot for members of the Executive Committee last evening, there was a tie vote, Dr. Merritt and Dr. Sanger each receiving 17 votes. That will have to be settled this morning.

Dr. Sanger—There being a tie vote between Dr. Merritt and myself, and Dr. Merritt being the older member of the Society, I beg to withdraw in his favor.

The President—The ruling of the Association has always been that the five gentlemen receiving the highest number of votes should constitute the Executive Committee. This year we are to elect but four, as the Vice-President is, *ex officio*, a member and Chairman of the Executive Committee under the new Constitution. There having been a tie vote between Dr. Sanger and Dr. Merritt, and Dr. Sanger having withdrawn, if there is no objection Dr. Merritt will stand as the member of that committee, he being the next highest. There being no objection, it is so ordered.

Dr. J. Allen Osmun read the following paper:

## THE LEGAL AND MORAL RESPONSIBILITY OF DENTISTS IN THE ADMINISTRATION OF NITROUS-OXIDE GAS.

*Mr. President and Gentlemen of the New Jersey State Dental Society:*

I propose to occupy your attention to-day with a brief review of this important subject. It is not my intention to go into the details of the various methods of manufacturing this agent, or the sources from which it is obtained, or its chemical constituents, or its action on the human system; these are facts which do not properly come within the scope of this paper. Anæsthesia has been extolled to the skies by many as the greatest boon that has ever been conferred upon the human family by the Divine Being for the relief of suffering during painful and tedious operations, while it is quite as customary to hear it condemned in the most severe language and by minds of no mean order. That both are absolutely correct cannot be admitted, for there must be some well-founded reasons to bring minds of the latter class to such decisions.

Dr. E. R. Squibb, in an address before the State Medical Society

of New York, used the following language in referring to this subject of anæsthesia:

"The condition of perfect anæsthesia is one of the most grave and frightful conditions of life, and by suspending more than half of vitality, it comes so near to death that it is wonderful to reflect how near the boundary-line can be approached and yet so rarely passed. The issues of life and death are narrowed to but within a few minutes; add to this the fact that it rests with the physician whether to produce it or not, and it is difficult to understand how its importance can be overestimated."

The above quotation is from an address delivered by a man who is thoroughly, and perhaps more able to speak authoritativley, than any one else, his experience being of the widest extent, and such being the case I earnestly commend his remarks to your most thoughtful consideration. That there is now and then a death from the administration of nitrous-oxide is not disputed, and that being admitted, it then is next in order to see how far a professional man is legally responsible for his actions, and also ascertain whether there is any difference between the legal and moral obligation, and to what extent.

The question of the legal responsibility of a physician, surgeon, or dentist, for unskillful treatment of a patient, is one not easily determined. There are in law no arbitrary rules by which we can fix upon the exact dividing-line between absolute malpractice and simply unskillful professional work. In the eyes of the law, a professional man is an expert in his particular field, and he must possess a fair average amount of information in his specialty, and use his knowledge in a reasonably competent and skillful manner. The case of Lamphir *vs.* Chipps, reported in the thirty-fourth volume of *Common Law Reports,* is in point. This was a case where the patient sued a physician for damages resulting from an alleged unskillful treatment of a bruised hand. In his charge to the jury, Chief-Justice Tindal stated the principles by which all cases of this character must be decided, and his remarks are so general that they would be applicable to almost any conceivable case. The Chief-Justice in summing up, after stating the pleadings, said to the jury:

"What you will have to say is this, whether you are satisfied that the injury sustained is attributable to the want of a reasonable and proper degree of care and skill in the defendant's treatment. Every person who enters into a learned profession undertakes to bring to the exercise of it a reasonable degree of skill. He does not undertake, if he is an attorney, that at all events you shall gain your case, nor does a surgeon undertake that he will perform a cure, nor does he undertake to use the highest possible degree of skill. There may be persons who have higher education and greater advantages than he has, but he undertakes to bring a fair, reasonable and competent degree of skill, and you will say whether, in this case, the injury was occasioned by the want of such skill in the defendant. The question is whether this injury must be referred to the want of a proper degree of skill and care in the defendant."

Under this charge the jury gave the plaintiff £100 damages.

From the Judge's charge in this case, we see that the question whether an alleged injury is attributable to a want of ordinary skill or care on the part of a practitioner is simply a question of facts for the jury to determine. It is well for us just here to inquire what we are to understand by ordinary skill. We recognize the fact that the grade of skill increases with, or in proportion as, the delicacy and danger of the operation increases. Ordinary skill in an oculist, is more than ordinary skill in a less delicate branch of surgery; and so in dentistry, such skill is higher as you progress toward the more complex and dangerous class of operations.

The Marine Court of New York lately rendered a judgment against a dentist for an alleged want of skill and care in the administration of nitrous-oxide. In this case the Judge laid down a slightly stricter rule than in the case of some former decisions. Briefly stated the story of the case is this: A patient applied to take gas and have a tooth extracted. The gas was administered and the tooth was broken in such a manner that part of it dropped down the patient's throat, lodging in the bronchial tubes. It took the man a month to cough it up, during which time he suffered severely. Now, you will see the connection when you hear what the Court said in summing up this case, charging that "as an anæsthetic deprives a patient of the control of his faculties and renders him unable to take any precautions or make any efforts for his own safety, the physician or surgeon administering it must exercise the highest professional skill and diligence to avoid every possible danger. The professional man, no matter how skillful, who leaves an essential link wanting or a danger unguarded, in such treatment, is chargeable with negligence, and answerable for any resulting ill consequences." You will at once notice that the latter charge takes a higher ground of responsibility than the other one quoted, and we can easily determine the relation in which we stand, as dentists, in the eye of the law, to the public.

It will now be proper to ascertain what are our relations in case of accidents, and how far a professional man is responsible, whether they result from his own acts or from those of an apprentice. The law on both these points is closely stated by Chief-Justice Tindal, in the case of Hancke *vs.* Hooper. The facts in the case may be briefly stated as follows: A man came into a surgeon's office, in his absence, and without asking any opinion as to the advisability of performing the operation, requested an apprentice to bleed him in the arm, saying that such treatment had in the past afforded relief to him from a disease with which he had been suffering. The apprentice bled the patient, from which disastrous results followed. A suit for damages against the surgeon was brought. In his charge to the jury, Chief-Justice Tindal said:

"The defendant is responsible for the act of his apprentice, therefore, the question is whether you think the injury the plaintiff has sustained is attributable to a want of proper skill on the part of the young man or to some accident. A surgeon does not become an actual insurer, he is only bound to display sufficient skill and knowledge of his profession. If from some accident or from some varia-

tion in the form of the disease of a particular individual, an injury happens, it is not a fault in a medical man. It does not appear that the plaintiff consulted the defendant as to the propriety of bleeding him; he took that upon himself, and only required the manual operation to be performed. The plaintiff must show that the injury was attributable to a want of skill; you are not to infer it. If a person goes into a surgeon's office and asks to be bled, saying he has found relief from it before, and does not consult the person there as to the propriety of performing the operation, and if there were no indications in the person's appearance that bleeding would be improper, the surgeon would not be liable for the bleeding not effecting the same result as at other times, because it might depend on the constitution of the patient."

In this case, the jury found for the surgeon. You will notice that particular stress is laid upon the fact that, in the case quoted, the patient requested the bleeding to be done, and said he had often obtained relief from such treatment heretofore. The point I wish to emphasize is this. If a person comes into a dental office, asks for gas to be administered, and does not ask your advice concerning the advisability of taking it, and should state, to justify his request, that he had often taken it without any ill consequences resulting, one would suppose, from the foregoing charge to the jury, that in the event of disastrous results, the dentist would not be legally responsible.

We all know that there is a wonderful difference in the susceptibility of different individuals, and equal differences in their reparative power. There is also in the same individual, at different times, a greater or less power of resistance to disease and to the lowering of the vitality at different periods of life, and if legally we are not supposed to take these things into account, we are bound by all the moral law to take all the precautions and perform every operation with the same care and careful oversight and attention to details as if we expected each succeeding case to be a variation from the general rule of safety.

In a Pennsylvania case, the patient had previously had a severe fall, which rendered him liable to paralysis, and he was therefore not a fit subject for an anæsthetic. The dentist, not knowing this peculiarity, gave an ordinary dose of chloroform, and finding it ineffective, gave more, until at length the expected effect was produced, and the teeth extracted. But the next day, the patient had an attack of paralysis, which his physician attributed to the overdose of chloroform, and he forthwith sued the dentist. But the Court said that a practitioner is not responsible for remote or unknown causes of injury, or for peculiarities of personal history or conditions which are not explained to him. There are many esteemed legal writers who take quite the opposite ground, and say that no physician should ever administer these dangerous agents without first making an examination and inquiry into the personal history. If a physician should do this, why not a dentist? for human life is just as valuable in the dentist's hands as in the surgeon's.

I will now cite another case to show what nature and amount of

proof is necessary to render a physician liable for negligence or carelessness. The principle from which this may be drawn is amply shown in the case of Rich *vs.* Pierpont. Mr. Justice Erle says in his charge to the jury:

"To render a medical man liable for negligence or want of due care or skill, it is not enough that there has been a less degree of care and skill than some other medical man might have shown, or a less degree of care and skill than even he himself might have bestowed, nor is it enough that he himself acknowledges some degree of want of care. There must have been a want of competent and ordinary care and skill, and to such a degree as to have led to a bad result."

Now, from these cases it is easily seen that all that can be demanded of a professional man is average reasonable care and skill, and whenever a question comes up as to whether such skill and care have been exercised, it is a question of fact for a jury. It will be seen that a professional man is responsible for the deeds of his student or workman, and not responsible for accidents—a point well worth remembering. The fact of a want of due care and skill must be clearly proved and cannot be merely inferred. A professional man is not obliged, in law, to do his best every time, but must only do ordinarily well; but morally, he *is* bound by all that is human in his nature to use, *every time,* his very best efforts. The whole drift of the law is to extend to professional men the widest possible leniency consistent with justice, and the sympathies of the Court will be with them.

We will now cite another case, to show what view the law takes of a circumstance, when a professional man of one kind assumes to go into the practice of another. In an action against a chemist and druggist upon an alleged retainer (as a surgeon and an apothecary) to treat the plaintiff for a certain disorder (for which mercurial treatment was improper), the charge being negligent treatment, it was held that if the defendant assumed to act as a surgeon or as an apothecary, he was liable as such, but that these words were not material and might be rejected, the substance of the decision being that he undertook to treat the plaintiff for a disorder, and did so negligently or ignorantly, that mercurial treatment in a case for which it was wholly unfit was such negligence or ignorance as would sustain the action. It is my desire to show by the case just quoted, and to bring out, that if we as dentists were so unfortunate as to lose a patient when in our chair, under the influence of gas, the question would naturally arise as to our qualifications to administer these agents, and whether we had used all the precautions necessary to insure safety.

The professions of surgery and dentistry were both recognized as distinct callings before the invention of any anæsthetic, and since its discovery, nitrous-oxide has been adopted by both professions to a greater or less extent, and as its effects and dangers are the same, whether administered by a surgeon or dentist, there can be no reason why members of both professions should not exercise the same precautions in its exhibition, and in a previous examination and care

of patient during and after its administration. We know that a medical man is not supposed to administer any anæsthetic, without knowing by a personal examination the condition of his patient, and if he does administer such an agent, without such an examination, and fatal results ensue, he would be amenable to the law. Now, if a physician is liable for the neglect of these precautions, why is not a dentist, to just the same extent? For if we go to Webster for interpretation of the term "dentist" we find that he says, "a dentist is one who extracts teeth, fills, cleans, and inserts artificial ones," but he does not say that the administration of anæsthesia comes strictly within the domain of dentistry. If this be true, when a dentist administers gas, he is on the domain of the medical man, and he is supposed, in the eye of the law, to take all the precautions for the safety of his patient that the other would have adopted, and the neglect of any of them would place him in the same situation as it would a physician for the same neglect.

When anæsthesia was first invented, a surgeon might have been of the most skillful, and could have amputated a limb with the highest degree of skill and success, yet, if he had administered an anæsthetic, without the knowledge of its action on the system, and the patient had died from its effects, it would have been no evidence of lack of skill as a *surgeon*, but simply of his ignorance of the dangers of this agent, and would undoubtedly have been held legally responsible for the death of his patient. In like manner, a dentist may be one of the most skillful and dexterous operators in either branch, and yet the fact must be patent to all that, if he administers gas and the patient dies from the effects, he would be held as legally responsible for it as if he were ignorant of the first rudiments of operative or mechanical dentistry. It would not have been of any use for the surgeon in the supposed case stated, to have pleaded his knowledge of the human system or his acknowledged skill as a general surgeon, for the one question which was pertinent was simply whether his knowledge of anæsthesia was such as to justify his administering it. And, gentlemen, if one of us should ever have a death occur during the administration of gas at our hands, the law would be silent as to our qualifications as to the filling of teeth or inserting artificial ones; the one question by which we would be judged would be, did we understand this agent and its manifestation on the human system, or the action of the heart in normal and abnormal conditions, or the respiratory organs in like conditions, and had we made an examination to this extent, to see if they were in a condition to make the administration of this agent safe. This to a certain extent is not possible for the average dentist to do; and the only line of safety is to demand of each patient that they be accompanied by their family physician or that they have his written certificate to the effect that it will be safe to administer gas, and then the only thing you would have to prove, in event of death, would be that you had administered it with all the usual precautions.

There is one point in relation to anæsthetics which it is always well to bear in mind, and one which can be amply demonstrated, that it is strangely associated with death in the minor operations of surgery.

If we could surround the taking of gas with more restrictions, it would aid materially in the preservation of the natural teeth. I believe the experience of all present will justify the conclusion, that since gas has come into use and the extraction of teeth has become a painless operation, it has become largely the custom for persons to have their teeth extracted by the wholesale, strange and incredible as it seems, and have artificial substitutes, rather than undergo the pain and annoyance attending the filling and preservation of them.

I did intend to say something on the question of always having the third person present at each exhibition of gas, for it is well known that many strange fancies fill the minds of many persons taking any kind of anæsthetic, but this portion of the subject would prolong this paper to a greater length than would be just to your patience. This subject is one which could be written on to an indefinite extent, but my object will have been accomplished if I can direct attention to, and promote discussion of, this, to my mind, the most important question that comes within the range of a dental surgeon, dealing as it does with human life.

DR. STOCKTON—Without attempting to discuss the paper, I want to say that I would be very glad if Dr. Osmun could be induced to continue the subject, with reference to the effects of anæsthesia upon the human system, and I make a motion that he be requested to do so in another paper.

DR. ATKINSON—Sometimes circumstances place you in a position where you are supposed to know more than you do know, and if you have the modesty to say so and confess your ignorance, you will be likely to be estimated below your merit. I have no word of anything but commendation for the paper and the manner in which the subject is treated. And I think it argues well for Dr. Stockton to push his mind forward and say there was something more in the same mine whence this was digged, that would lead to something like a scientific apprehension of what we are about when we deprive our patients of consciousness. It is a deep subject, very extensive in range, and to properly discuss it would occupy a great deal of time. I do not propose to occupy your time in giving a review of the paper, which is evidently the product of much thought, reading, care, and a keen mental appreciation of the subject.

DR. HAYHURST—I don't know that I have much to say, except in commendation of the manner in which the paper has been gotten up. I know something about these legal points that have been stated, and I know that there is a delicacy in exactly separating what may be termed criminal action from that which is not criminal; in separating, or defining the point from which we might diverge and become amenable to the law for our ignorance or malpractice, and this side of which we may safely practice under cover of our profession and our sheep-skins; I know that there is very great difficulty in this, and nice discernment is required in the separation of these two fields. We are called upon under almost every circumstance that we can imagine to administer this direful agent; and we hear on all sides that there is no danger in administering

nitrous-oxide; we hear that from dentists all over the land, and from their patients, who will say: Doctor, I am perfectly satisfied to take the gas, I have done it so frequently that it is not necessary to go through an examination to find out whether I am a fit subject or not. And so, on the very questions that you may ask the patient on this point you may be induced to give this direful agent; and, according to the decisions given in the various cases recited in the paper, you see how careful you must be to navigate safely between these several points in order to secure yourself against legal prosecution. You have not only your own judgment to insure against fallibility, but your patient is often so anxious to take the gas in order to have a tooth extracted without pain, that he or she will tell you that which is not true in regard to his state of health, and you are often misled. I remember a case where I administered ether to extract some teeth, which I did carefully, and it was a successful operation, so the lady told me. Before administering the ether I questioned the lady and asked her whether she had consulted her family physician in the matter, and whether she had been under treatment for any disease which might be inimical to the administration of ether. She told me she had the concurrence of her physician, and that she had never been under treatment for anything that would interfere with the administration of ether. I administered the ether and extracted the tooth, and it was a successful operation. A few days afterward I heard from an intimate friend of hers that she went home and told "how I fooled that dentist; you know the doctor has been attending me for heart disease." I said to the lady, "yes, she imposed upon me, but she did not injure me as much as she might have injured herself by her falsehoods, because her life was in her own hands; she placed it in mine with a lie, and she deserved to suffer for it." You will find that to be the case all over the country. There are dentists who do little else than administer this agent, and they say there is no danger in it, but by the examples given us you see that it is a very delicate and dangerous matter. How often have I looked upon the face of a patient as she lay back in the chair, her eyes closed, her countenance as pallid as death's, and the marks of death upon her lips, so that any person in the room would suppose that her soul had taken its flight to the regions of eternity; and yet it was not death, but so near it that one may see how nice an operation this administering an anæsthetic is, and how near we tread upon dangerous ground. I call upon all members of the profession, instead of making these wholesal statements that there is no danger in administering this anæsthetic, to deliberate, to use all the precautions and the very best judgment they have in the matter; not because they desire simply to escape the grappling-irons of the law, but in order that they may be morally blameless in their operations. If you do the very best you know how, it will be none too good. Of course, there are dentists who have a higher sphere and greater excellence than the majority of us have, but nine-tenths of the people who require our services cannot expect to have the highest attainments in dental science at their beck and call; they must go to New York, Buffalo, Philadelphia,

and other great centres of wealth and population and learning in order to get the very best skill and knowledge, but all of you should use to the fullest extent the talents God has given you, in endeavoring to preserve the lives and promote the health of the patients who come into your hands.

DR. LOUIS A. READING—The paper has been so well praised that it is not necessary for me to add anything in that direction. I have had considerable experience in the administration of ether, much more than in the administration of nitrous-oxide gas. I was called upon a few weeks ago to administer ether to a lady who was to undergo an operation for cancer. The physician in charge had neglected to advise his patient in regard to eating, and she had taken a hearty meal just before we arrived; the operation was to take place at two o'clock, and she had dined at one. The only part I had in the operation was to administer the ether. I proceeded with it quite satisfactorily; the excitement was very slight, not so much as I usually expect to find, particularly in that class of temperament to which our patient belonged; but when the stage of excitement was through with I noticed that she began to be a little nauseated. I discontinued the ether a moment, to give her a chance to vomit. She vomited thoroughly her dinner of eggs and beefsteak. A piece of beefsteak that she was about to throw off got lodged in the æsophagus, and, although it did not stop her respiration, I noticed that she was considerably embarrassed, and I called the doctor's attention to it. There were three physicians in attendance, but one of them walked over to the window; the other two came to my rescue. I got a pair of forceps and grasped her tongue, while the doctor removed the piece of beefsteak from the æsophagus. I relate this case simply to show the importance of taking precautions before we administer an anæsthetic, particularly ether, and to compliment the doctor on his remarks upon that point. We all know how important it is to caution our patients not to eat heartily just before taking an anæsthetic.

A motion to pass the subject was carried.

DR. E. H. BUNTING, SR., read the following paper:

## ÆSTHETIC DENTISTRY.

A pleasing feature of the nineteenth century progress is the tendency of modern artists to treat all subjects from an æsthetic as well as a sanitary stand-point.

Health and beauty are synonymous, and science was never so potent a sovereign as in the present methods vouchsafed for their preservation. As an adjunct to physical well-being, the teeth are all-important. Health and life depend upon the aid they render in moving the intricate machinery of the human system. They are the pivots upon which many forces turn.

"No man is a man minus his molars," is scarcely an exaggerated statement of the state to which the "lord of creation" is reduced by the absence of teeth. Digestion is retarded and he becomes a

prey to nightmares innumerable. Life loses its savor if deprived of those pleasures of the palate which caused the Sybarite to desire a lease of his life for a thousand years.

The slightest failure upon the part of these diminutive accessories to perform their functions will clog the ponderous wheels of toil, and strike discord from the most intricate mental or moral machinery; in short, the scientist was not far wrong who likened any derangement of the delicate nerves which find lodgment in the teeth to a subtle demon who plays Delilah to the veriest Samson in our midst.

So much for results to which we are indebted for some of the grandest triumphs of modern science.

The annals carry us a long way backward to the Master whose handiwork has swayed constructive artists to whom even Mozart's majesty was a myth, from the laboratory to the sanctuary. Here we bow, abashed by an original triumph which modern handicraft may never attain.

Now, concerning this beatific construction: Let us inquire; every detail is masterful. There is no halting in the grand economy of forces forming the whole. The form is symmetrical as that of the Venus de Medicis, the chevelure and complexion perfect as that for which the fair Castilian was famed—the eyes are of course divine, and the teeth "Eugenia." Now we come to the point at issue.

The mother being the first minister, and the first artisan of humanity, her first care should be the transmission of pure blood and sound muscle to her progeny. She should think the thoughts that will make them strong, and eat the food which will render them vigorous and enduring. Every child has a divine right to be beautiful, and if it be not so, there is an omission somewhere. If the supple limbs be unshapely, then must art come to the rescue and perform what Nature under pressure has failed to achieve. If the spine fails to fulfill its functions, she resorts to the electric stimulus which can supply lack of strength and vigor. If the complexion be sallow and lacking in the tints essential to beauty, we must look to the diet, selecting as a matter of constructive economy certain flesh-forming substances which will best clear the muddle. If the eyes be weak, those ministrations which at once strengthen and invigorate the brain must be sought, all the time remembering that bone and sinew have each their mission in performing the work of the system, as well as contributing to the external perfection of things which betray the infintie origin.

There is not in the annals of all the creations a construction which can compare to the human frame. The first attempt at critical analysis of its composing elements will go very far toward convincing even a skeptic of the divinity of the human species. Every atom is perfect in itself; and yet the absence of the smallest one would mar the harmonious action of the whole.

There is, perhaps, no vocation on earth where so much is left to conscience as in the matter of treating the mouth whose teeth have been left to take care of themselves until Nature has broken out nto an unquenchable revolt. Pain—and such pain—is an argument

which humanity is slow to resist. The strongest constitution is swayed as a reed in high winds, by the iron grip of an agony for which there is no resource save the formidable forceps, of which humanity has a wholesome dread. The mission of the dentist is to remove pain by first inflicting pain! Per consequence, we hold him in that sort of blood-curdling awe with which we regard the ghosts of duties unperformed.

These issues constitute a fertile field for the exercise of that foresight which would prove to modern science an invaluable aid.

Again let us retrace our steps. The old adage, "Two steps backward to one forward," is more clearly demonstrated in the annals of dentistry than, perhaps, in any other science. Mothers should look specially to the formation of the teeth of their offspring. Certain foods tend to the production of strong teeth which will not crumble at the touch of sweets, or discolor under the influence of modern esculents. Teeth that betray the work of the cereals in their construction; teeth that will do to live by and to die by; teeth which are suggestive of the strength, vigor and character they are destined to express, are an adjunct as essential to the perfection and harmony of the human figure as the eyes, which are mirrors of the divine, or the flesh, typical of humanity.

These accessories of the system are of slow and painful growth. They are, in truth, a second birth, born of the necessities of digestion, and they are, as a general thing, sufficient, not only as an element of beauty, but an indispensable appendix to health. If we could examine at will the death-record, we should, with few exceptions, find that the diseases which proved fatal had their origin in lack of mastication resulting from imperfect or insufficient teeth. If people only realized the importance which attaches itself perforce to this branch of constructive economy, the dentist's chair would cease to have the terrors which now menace the victims of imperfect teeth.

They should be good and beautiful, for nature is a royal benefactor, who never fails of herself. Her resources, if not weakened by use or impared by disease, are simply perfect. The necessities of approximating as nearly as may be the original standard, has imparted an æsthetic side to this sensitive subject.

The conscientious mother will be a scrupulous guardian of the texture, shape and growth of the teeth of her charge. She will esteem her dentist an incident or an accessory to household economy quite as important as the minister or family doctor, to whom she flies under pressure of those ills to which all flesh, especially infant flesh, is heir. Never was the old adage concerning that ever-seasonable and potent "ounce of prevention" more forcibly exemplified than in the treatment of the teeth. There are, of course, instances in which all precautions fail. The enemy will come, despite the vigilance which does not slumber at its post.

The richest and most varied resources of nature must fail anon, and she avail herself of the immunities of her handmaiden, art.

Now we come to the developments of modern dentistry, which embody an art so perfect as to conceal even the trace of art. Let us

reverently enter the domain in which the genius of the present practitioner reigns supreme.

The instant the patient is in the chair, with that sublime instinct to repair damage and to remove pain, comes the perception which is half an inspiration, and which enables him to decide concerning the tastes and habits of his subject, and to adopt the remedies at hand.

To supply, in any sense, the deficiency of nature, is a grand thing. The artist-dentist will, of course, avoid all appearance of the craft which savors of supply. If there be pain, the first duty will be to remove the cause; this done, of course, study the effect, keeping nature, the grand first cause, perpetually in view.

The artist-dentist will study the requirements of the mouth with which he has to deal as carefully as does the physician the system in which his remedies are expected to restore health and perpetuate life. A knowledge of the tone and habits of the patient are issues of vital interest upon which, oft-times, a cure depends. Like the dentist, he too finds it essential to pull down before building. It is poor policy to rebuild a structure upon an unsound basis. Decaying sleepers and crumbling masonry, if not removed, must be so thoroughly repaired that not a vestige of the spoiler remains.

The necessity of making a clean mouth to begin with bears upon its face the fallacy of a certain tooth-crowning process which may prove an excellent adjunct in improving or altering the appearance of the mouth if applied to sound teeth, that is, if the accessory be fitted so accurately as to prevent the lodgment of food particles, which, the crowns being stationary, are not easy to remove.

This we esteem an innovation on established laws, a trifle incomplete, to say the least. Other departures are more decided and prolific of results pleasing and profitable.

It is, of course, no part of my object to discourse upon the science so familiar to my learned colleagues of the chair; yet one fact suggests itself as worthy of repetition:

The natives of northern Siberia have singularly healthy teeth. Old men of sixty or seventy have sets of teeth small and pearly white, polished and healthy. Decay and suffering are unknown. A physician of Yakiotake attributed this to their habits and the kind of food eaten by the natives, and to a certain care taken by them from childhood up. First, the natives do not touch sugar in any form, for the simple reason that they cannot afford to buy it. Secondly, they are in the habit of drinking large quantities of fermented sour milk, summer and winter, which is antiscorbutic, and is very beneficial in preserving the teeth. And lastly, they have the habit of chewing a preparation of the resin of the fir tree, a piece of which, tasting like tar, they masticate after each meal, in order to clean the teeth and gums of particles of food that may remain after eating. The gum, or resin, is prepared and sold by all the apothecaries in Siberia, and is much used by Parisian ladies.

A marked triumph of modern dentistry has been to take from false teeth the ghastly aspect imparted by an unnatural whiteness; a wholesome tint is imparted and an assumption of naturalness

observed which would readily baffle the perception of critics unfamiliar with tricks of the craft. Modern artists are careful to avoid any appearance of setness in the formation. Many times a facial defect may be remedied in the second set of teeth.

The old tragedy of Fantine selling her beautiful teeth, as told so touchingly by Victor Hugo in "Les Miserables," recurs less frequently, though now and then the demand for transplanted teeth is successfully dealt with. If the tiniest cavity can be found, the filling will increase the appearance of naturalness, which is the acme of art.

DR. WATKINS—I would like to ask if the Committee on the Legislative Bill, that reported progress, is continued for another year?

THE PRESIDENT—They simply reported progress; that is all that has been done; you can make what you please of it. The chairman of the committee is not here, and Dr. Osmun moved to accept that report.

DR. WATKINS—When that committee was appointed, it was appointed, I believe, for one year.

THE PRESIDENT—No time was set; they were ordered to procure from the Legislature the amendment to the law proposed by President Barlow.

DR. HAYHURST—I do not like to take up so much time myself, but I will say a few words if no one else desires to. Æsthetic dentistry, within a few months, perhaps a few years, has grown into prominent notice. Circumstances have occurred which give this term a very wide range, and I don't know but a very proper one, but it seems to be spreading over the general affairs and human life, and all things seem to be sheltering under some term that denotes a progress toward beauty, or ornament, or something of that kind. A new word has been coined to meet the necessities of this line of progress—dude, or dudy, as it is sometimes pronounced. That term is applied to the progression toward mere show or beauty. There is another type of æstheticism that will be known if I mention the name of a certain gentleman who attracted a great deal of attention as he passed through the land lately, a gentleman by the name of Oscar Wilde. I don't know whether any one lives in this community under that name or not. I do not intend to be witty, that is not in my line, but I want to see how this æstheticism bears upon the subject of dentistry. What is this æsthetic property? Is it beauty? We speak of children being beautiful when their parents and themselves obey the laws of their being; that certain effects may be produced by certain operations, and beauty may be cultivated. But what is beauty? We may say one thing is beautiful or æsthetic, and another person will say another, and a very different thing, is beautiful. Certain inhabitants of certain districts of Asia color their teeth black. The highest type of beauty to them would be a set of black teeth; but that would not pass for æstheticism here; we want white, pearly teeth, perfect and regular, that give a pleasant expression to the countenance, and no marring of nature's mouth-piece shall take place under this idea of æsthetic dentistry. We must go

further back than the treatment that the dentist gives, we must go back to pure lives and simple habits, we must go back beyond our immediate ancestry, whose "eating of sour grapes caused their children's teeth to be set on edge." We must go back past them to that which produces this characteristic of the American face, the narrow, compressed jaw. As I have said before, the type of the American face is a narrow one, peculiarly so I think, and I say we must go behind all this before we can get up to what I might call æsthetic dentistry, and what would perhaps be properly so called. But as black teeth are now considered beautiful by some, a narrow jaw and some things that are now abhorrent, may some day be esteemed beautiful; therefore I ask whether there is any standard of beauty except such as habit and fashion may dictate.

DR. J. A. ROBINSON—I beg to say a word with regard to the meaning of æsthetic. I should define it as that which is perfectly harmonious, and that which corresponds to our highest type of beauty in the civilization of to-day. And while I have been pained at seeing some of the deformities that have been brought about by modern dentistry in the application of artificial dentures, I would say that I believe æsthetic dentistry means that which restores the contour of the face to its normal condition and makes the features of the person as presentable as possible to his neighbors and to the world. I have just come from Boston, which is, as you know, the hub of the universe and the æsthetic city of America, and while there I called on a friend whom I had not seen for a few years, and I was struck with her altered appearance; I was almost horrified, for, by the application of a set of artificial teeth, her face had been so changed and distorted that I almost shrank from contact and salutation with the woman who had once seemed to be beautiful. I said, "What have you done to yourself? Age could not have made such a change in a face that was once beautiful; you have had a set of artificial teeth." She said yes, she had. I told her to go back to the dentist who made them and see if he could not alter them. She said they were made in Salem, and it was not convenient. I took them out of her mouth, and, with a small spirit lamp and a pen-knife and some modeling composition, I molded them over in my hands, attaching to the outside sufficient material to restore the the face to its natural fullness and contour; and when I presented the lady to her daughter and grandchildren, they hardly knew her, her appearance was so changed and improved. Therefore I say that æsthetic dentistry is that kind of dentistry that restores the features, not with pearly white teeth, as has been said here, but with teeth that correspond to the features, and by the application of plumpers, if you please, replacing by artificial substitutes what has been lost, so that the person may as nearly as possible represent what she did when the natural teeth were in their proper place and nature had not been distorted by the use of the things that are sometimes worn, and which are very offensive to those who have the least idea of harmony in the human countenance.

A motion by DR. MEEKER to adjourn until three o'clock this afternoon was carried.

## AFTERNOON SESSION.

The President in the chair. The roll was called by the Secretary.

DR. OSMUN—*Mr. Chairman:* I move you, sir, that the committee that was appointed by this Society to go down to the State Legislature to try to procure the passage of our dental bill, that committee having reported progress, I move that they now be discharged with thanks. I make this motion with the fact in view that there is to be at Niagara Falls on the seventh of next month, a meeting of delegates from the Boards of Examiners of the different States—what might be called a National Board of Examiners—and they may form and promulgate a law which may perhaps be adopted by this Society; and in any event this committee can be appointed at some future time, if it is still thought necessary to pass this bill. The bill was defeated last year, and I think the best interests of the Society demand that no further steps be taken in the matter at present. I move that the committee be discharged.

THE PRESIDENT—I believe the matter was disposed of this morning.

DR. OSMUN—No, sir; the committee reported progress.

THE PRESIDENT—I shall have to declare the motion out of order.

DR. OSMUN—I appeal from the decision of the chair. The chair is bound to entertain any resolution that comes up in the regular order of business, and I demand that my resolution go to a vote. If it does not go to a vote, I appeal from the decision of the chair.

THE PRESIDENT—The resolution is to discharge the Committee on the Legislative Bill. That was disposed of this morning. The committee reported progress, and they report progress still.

DR. MEEKER—I was a member of that committee, and I may speak on this question. I consider this motion entirely out of order. The committee reported progress this morning, and they may or may not report in full before this meeting closes. The committee, after laboring a year in the interests of the Society, should, I think, have some courtesy shown them by this Association, and an opportunity to make their report. The chairman of the committee or the members are not present. The motion is entirely out of order.

DR. STOCKTON—The chairman of the committee said to me that he would be very glad indeed to have the committee discontinued. The committee was appointed to go before the last Legislature, not a future one.

DR. MEEKER—I do not think the Legislature has anything to do with this matter. The committee was appointed to go before the Legislature to get a bill passed, and they will do it and make their report. All they have done here to-day is to report progress, and I protest against taking a vote on this question now, before the committee has been allowed opportunity to report.

DR. OSMUN—They have had opportunity; they had opportunity this morning, and were asked to report, and they did not do so. It is no surprise, for one of the members went and asked them for the

privilege of having this thing brought up before he left. It is nothing more than just and right that he should have an opportunity to hear the report of the committee, and the committee knew it would be brought up this afternoon. I ask that my motion be put to vote.

DR. MEEKER—I do not see why some members who wish to go away before the close of the session must force this question through, against the wishes of those who come to stay the full length of the session; I don't see, because Tom, Dick or Harry wants to go home, why this thing should be forced through.

DR. STOCKTON—I am neither Tom, Dick nor Harry; but I wish to say that I have opposed this bill, and the committee have had ample opportunity, since the Legislature adjourned, to have assembled, considered the matter and prepared their report. The bill was presented to the Legislature, and failed to become a law. It was not contemplated, when the committee was appointed, that they should be continued and go to another Legislature, but it is evidently intended, from the tactics pursued here, that this committee shall go over for another year. The Boards of Examiners connected with the various State Societies have proposed a National Board of Examiners, so to speak, which is to meet on the 6th of August at Niagara Falls, and in all probability they will consider this matter and promulgate a bill that will be acceptable to everybody. Therefore I think it is perfectly competent to make this resolution that this committee shall be discharged, especially so in view of the fact that the chairman of the committee said, a little while ago, that he would be very glad indeed to have this committee discharged. They have done their duty faithfully, there is nothing else for them to do; the Legislature they were appointed to see has gone out of existence. If this State Society desires to continue this committee, they have only to vote against this resolution of Dr. Osmun, but if they do not, then let us vote to dismiss this committee, and, if it is deemed desirable, have another committee appointed at some future time. There is no reason for going into the merits of this question, whether the law should pass or not, but I think it is the best for this Society that this committee be discharged.

DR. MEEKER—I do not see what the Niagara Falls Association has to do with this bill. It is foreign to the subject. This committee is still in power until they make their report. The President cannot entertain any such motion.

DR. LEVY, (Chairman of the Committee), [Entering]—Could I hear the motion read that is before house?

DR. OSMUN—My motion is that this Legislative Committee be discharged with the thanks of this Association.

DR. LEVY—I move that it be laid on the table.

DR. STOCKTON—I move that it lay on the table until our next annual meeting.

DR. LEVY—I accept the ammendment.

THE PRESIDENT—The motion as amended is to lay this matter on the table until the next annual session.

DR. LEVY—My motion was to lay Dr. Osmun's motion on the table.

THE PRESIDENT—The Society will understand that Dr. Levy's motion is to lay Dr Osmnn's motion on the table.

DR. LEVY—I ask that Dr. Osmun's motion be reduced to writing, and I call for the ayes and nays.

THE PRESIDENT—The gentleman will reduce it to writing immediately.

DR. STOCKTON—While Dr. Osmun is reducing his motion to writing, I will take the opportunity, and with great pleasure, to introduce to the Society Dr. J. B. Rich, of New York.

THE PRESIDENT—We are very glad to see Dr. Rich and to welcome him to our floor.

DR. OSMUN read his resolution, as follows: That the committee appointed by this Society to urge the passage of an amendment to the dental law be discharged, with the thanks of the Society for their labors.

THE PRESIDENT—It is moved that this motion be laid upon the table and the ayes and nays are called for. The Secretary will call the roll.

THE SECRETARY reported 23 affirmative and 11 negative votes, and the motion was declared laid upon the table.

DR. LEVY—I will report, on behalf of the Board of Examiners, that they have selected Dr. Hayhurst to represent them in the Convention of the Boards of Examiners of the different States, to be held at Niagara Falls. They also report that they will donate their fees for the past year to the treasury of the State Society.

On motion, the report of the Board of Examiners was accepted.

DR. WATKINS—Mr. President, may I ask if that Legislative Committee is ready to make their full report?

THE PRESIDENT—They are not.

DR. WATKINS—When will they be ready?

DR. LEVY—If it is so desired, the committee can get their report ready at the next meeting of this Association, a full and detailed report, stating what they have done and why they have done it, and what they have not done and why they have not done it.

DR. WATKINS—That does not seem hardly fair. The gentlemen who opposed the bill will leave this afternoon, then the report will come in after they are gone, and there will be no one to object to the report.

DR. LEVY—The committee is fully aware that the parties who are opposed to this bill come down here one day and want to go back the next; that they come down merely to attend the election, and then hurry back as soon as it is over; and I think that if they cannot take the time to stay here and attend the discusssions and the business of the Society, they had better go at once.

THE PRESIDENT—The gentlemen who may be opposed to this measure should remain here as long as any one else. If their other obligations compel them to leave before the close of the session, I think they will have no reason to feel aggrieved if the committee report after they are gone. I presume, with a majority vote, the Committee would report, if the Society wishes.

DR. STOCKTON—This committee have had ample time to make

their report, and I am well satisfied in my own mind that they do not make it for the reason that they do not want to.

THE PRESIDENT—The Chair acknowledges that they have had time, but the Chair thinks that if Dr. Stockton and Dr. Watkins could remain until the end of the session, they would have the report. Before proceeding to the consideration of papers I have one or two matters here to dispose of. The Committee on Resolutions of Respect to the memory of Dr. Webb will be Dr. C. S. Stockton, Dr. C. A. Meeker and Dr. S. C. G. Watkins.

DR. STOCKTON—We would have to report before the Society adjourns, and I leave this afternoon; I could not attend to it.

THE PRESIDENT—Not of necessity. The committee will have power to report at the semi-annual meeting. I should like your name to remain on that committee. The Committee on Candidates to Dental Colleges will be Dr. Hayhurst, Dr. Geo. C. Brown and Dr. W. Pinney. The selection of the next place of meeting was not made; you will proceed to select the place now.

Asbury Park, Cape May, Atlantic City and Long Branch were named, and Asbury Park was selected as the place for holding the next annual meeting, the vote being as follows: Asbury Park 17, Long Branch 9, Cape May 5, Atlantic City 3. The vote was announced by the President.

DR. LEVY said seventeen was not a majority of the votes.

A motion was made to make Asbury Park the place of meeting by a *viva voce* vote.

DR. LEVY moved to amend by making it Long Branch.

DR. BALDWIN suggested that the five votes for Cape May should be thrown out, as the nomination had subsequently been withdrawn.

After some further discussion Dr. Levy withdrew his objection, and Asbury Park was again and finally declared to be the place for holding the next annual meeting.

DR. GEO. C. BROWN read the following paper:

## A RESUME OF THE DIFFERENT PREPARATIONS OF GOLD USED FOR FILLING TEETH.

It is not known when, where or by whom the operation of filling teeth was introduced. It has been claimed to go back before the Christian era, but no definite account has ever been handed down to us of the ancient methods of filling teeth. The first authentic writings on the subject may be found in a work published by John Hunter, F. R. S., London, 1778. Under the heading of "Stopping of the Teeth," he says:

"If the destruction of the life of the tooth, either by drawing and restoring it again, or by actual or potential cauteries, has not been effected, and only the cure of the inflammation has been attempted, another method of preventing inflammation is to be followed, which is to allow as little stimulus to take place as possible. The cavity of the tooth not being capable of taking this alarm,

like most other cavities in the body, and, of course, not suppurating, often no more is necessary either to prevent the inflammation from taking place altogether, or extending further, than to exclude all extraneous irritating matter; therefore, the stopping up the cavity becomes in many places the means of preventing future attacks of the inflammation, and often retards even the progress of the disease, that is, the further decay of the teeth, so that many people go on for years thus afflicted. But it is a method which must be put in practice early, otherwise it cannot be continued long, for if the disease has done considerable damage to the inside of the tooth, so as to have weakened it much, the whole body of the tooth most probably will soon give way in mastication; therefore, under such circumstances, the patient must be cautioned not to make too free with his tooth in eating.

"Gold and lead are the metals generally made use of for stopping teeth. Gold being less pliable, must be used in the leaf. Lead is so soft in any form as to take on any shape by a very small force. Stuffing the hollow tooth with wax, galbanum, etc., can be but of very little service, as it is in most cases impossible to confine these substances, or preserve them from being soon worn away. However, they have their uses, as it is a practice which the patients themselves can safely put in execution.

"It often happens from neglect, and much oftener in spite of all the means that can be used, that the tooth becomes so hollow as to give way, whereby the passage becomes too large to keep in any of the above mentioned substances; however, in this case, it sometimes happens that a considerable part of the body of the tooth will still stand, and then a small hole may be drilled through this part, and after the cavity hath been well stopped, a small peg may be put into the hole, so as to keep in the lead, gold, etc. But when this cannot be done, we may consider the broken tooth as entirely useless, or at least it will soon be so, and it is now open to attacks of inflammation, which the patient must either bear, or submit to have the tooth pulled out. If the first be chosen, and the repeated inflammations submitted to, a cure will be performed in time, by the stump becoming totally dead."

In the work of Joseph Fox, F. R. S., published in the year 1806, under the head of "Stopping the Teeth," he says:

"In stopping the teeth, the first thing to be done is to cleanse the cavity from all extraneous matter, and to wipe it out dry; then a piece of gold or tin foil leaf is to be introduced, and carefully and firmly pressed in, so as to completely fill up the cavity, and allow the mouth to be closed without pressing forcibly upon it. The stopping is then to be polished, and being quite smooth, it will not be in any way offensive to the tongue. A decay in the central part of the teeth is the most favorable situation for retaining the stopping; when it is in the side, or between the teeth, the pressure of the food is liable to displace it, and therefore it requires frequent renewals."

Of instruments for stopping the teeth, he says:

"They consist of a hook for picking extraneous substance out of the cavity; a straight and a curved instrument for pushing the stop-

ping into the tooth, and an instrument with a bulbous-formed end, to be used as a burnisher in polishing the surface of the stopping."

Harris says that it was not until the year 1800 that the use of gold became common among dentists. For the next twenty or thirty years the use of gold was confined mostly to dentists in the large cities. Dr. Eleazar Parmly states that the first gold filling he ever saw was in 1815 and this was put in by Dr. Waite, of London.

About the years 1812–13 Marcus Bull, of Hartford, Conn., began the gold-beating business. He afterward moved to Philadelphia, and in the year 1818, in connection with Chas. Abbey, who had been his apprentice, began regularly the manufacture of gold-foil, he being the first manufacturer of gold-foil in this country, venturing at first only to make an ounce or two at a time, the numbers running over 4, 12, 16. From that time there has been a gradual advance in the amount manufactured. Gold was first used in the form of pellets placed in the cavity and forced by wedge-shaped instruments against the sides, finishing with a centre-piece forced into a wedge-shaped aperture. The first notice I have been able to discover of crystallized gold in connection with our profession, is in an article by Dr. C. T. Jackson. It is entitled, "A New Method of Extracting Pure Gold from Alloys and from Ores. By C. T. Jackson U. S. G. S." He says: "I have made several useful applications of the gold sponge thus prepared, and had a tooth plugged with it in October, 1846, to which purpose it is well adapted. By moderate pressure, the spongy gold becomes a solid mass, and burnishes quite brilliantly." We hear nothing further of crystal gold until 1853, when Mr. A. J. Watts, of Utica, N. Y., and Mr. Joseph Barling, Maidstone, Kent, England, appeared in the field almost at the same time. The nature of this invention consists in dissolving gold in mercury, and after treating with heat or otherwise, dissolving out the mercury by nitric acid, and then subjecting the new conditioned, but as yet unfinished, gold to the action of a particular heat, whereby it is rendered coherent, soft, and malleable, thus fitting it for the purpose of filling teeth. In less than a year this material was manufactured and advertised by at least three different parties—the original patentee, under the name of A. J. Watts & Co., and N. P. & H. R. White, both firms being located at Utica, N. Y., and Messrs. Taft & Watts, of Xenia, Ohio. As a matter of curiosity, I will copy their advertisements:

"Watts' Patent Prepared Gold for Filling Teeth. This is a preparation in various forms, of a spongy, laminated, or crystalline character, so soft, plastic, and adhesive as to admit of being welded, piece by piece, by simple pressure, into a body so solid that it may at once be beaten into foil or drawn into wire. It possesses the following advantages over foil: 1. It must necessarily be pure gold. 2. It may with ease, and with comparatively unpracticed hands, be worked up to any external form in the tooth, with a perfection and beauty which it is believed impossible to attain with foil in the hands of the most skillful. 3. It adheres to the tooth with such tenacity that it can only be extracted by drilling or breaking the tooth, and when thus removed the plug will be found covered with

numerous small particles of bone adhering to it. 4. It requires for its use less practice and skill to accomplish good work, while it amply repays the skillful operator in the production of splendid fillings. 5. It makes an absolutely solid plug."

These preparations were soon followed by "Morgan's Plastic Gold," Lamm's Shredded, etc. Sponge gold at once took a high stand and was heralded far and wide. It had the approval of such men as Dwinell and Arthur, and was written about in all the journals, discussed at the meetings, and for a time was a great hobby with many. It was somewhat amusing to hear the claims put forward by some of its friends. One point was, that it would work as well under water as dry; another claimed that he never took the trouble to dry out the cavities when using it; he rather preferred to have them filled with saliva, as it made the gold work better; and one gentleman said he had worked it in flour with perfect success. For a time it was extensively used by a large number of the profession. I used it with very good results, but gradually the profession fell back to foil. In the year 1855, at the meeting of the American Society of Dental Surgeons, Dr. J. S. Clark, of New Orleans, described his method of introducing gold in the shape of cylinders:

"The foil is carefully rolled into cylinders, as a bolt of cloth is rolled, and of a length to suit the depth of cavity, and intended to be a little longer than the cavity is deep. They are rolled of all sizes, from a full sheet down to the size of cambric needle wire. Some are made conical in shape, but most are plain, straight cylinders. Some are rolled very lightly, others quite hard. The application is to place soft (or lightly rolled) ones in the cavity endwise, being careful that each cylinder reaches the bottom of the cavity and protrudes a little outside the orifice. When the cavity is apparently full, a round instrument is passed down between them, another cylinder (a little harder rolled), is forced up. This is repeated, decreasing in size of instrument and cylinder (the latter of increased hardness), until no more can be introduced."

In the same year Dr. Arthur, of Baltimore, brought before the profession a new method of using *gold-foil.* It consisted in thoroughly annealing the foil in a spirit lamp before using, thereby developing its cohesive properties: "There are two methods in which gold may be prepared in the manner proposed. It may either be used in the form of pieces cut from a rope, or the sheet may be cut up or torn into small pieces, without folding or rolling it up."

With the advent of crystal gold a new field was opened to the profession, in the building up of lost portions and the restoring of gold crowns to badly broken and decayed teeth. With cohesive foil it was carried still further, and was followed by what was known as contour filling, a style of filling now brought to a great state of perfection. Operations not thought of before were now of every-day occurrence, and this new department gave operative dentistry a great start forward.

A few years after Dr. Atkinson introduced to the profession that delicate little instrument known as the mallet, for condensing gold. Then arose another great and important question, What weight was

best adapted for condensing the gold? One said one ounce; another two and three; another half a pound. Some wanted steel, some wood, some lead, etc. Never shall I forget calling upon one of the distinguished members of the profession, and during my brief stay asking him to show me the kind of mallet he used and liked best. He said certainly, and went to a stand near by and brought out at least a peck, and said, "There are the kinds I use." What did I behold? Mallets in every form and weight, from the tiny toy to a sledge-hammer; some in all their original form and beauty, others beaten out of all form and comeliness, and as I gazed on the battered remains before me my mind wandered back to the time when this transition was going on, and I wondered to myself how many lived to tell the tale of their escape from these battles with mallets.

Immediately following the mallet came the heavy gold fever. Up, up, it went, from the old 4, 5, 6, to 30, 60, 120, 240, and still higher, until some said a perfect filling could hardly be put in unless you used 480.

After heavy gold got settled a little, came the different forms of gold. Who among the older members does not remember the oily-tongued French gentleman and his tooth-brush handle. He was like a shadow at our meetings; in fact, he was ever present with us, just to show how easy it was to fill a cavity if you only used his gold-foil cylinders and *blocks;* just so easy, and he would demonstrate to you with that everlasting tooth-brush handle, and even if the filling got wet, "no harm; shust so good as before; you shust burnish the surface and my gold blocks stick shust as well as before, you see."

To ascertain as nearly as possible the numbers and kinds of gold most used by the profession at this time, I addressed a letter to a number of the leading manufacturers of gold-foil, asking them the following questions: 1. How many kinds of gold do you manufacture? 2. Which has the largest sale, soft or cohesive? 3. What number is most used? From Charles Abbey, the oldest manufacturer in the country, I received the following: "We do not manufacture anything but gold-foil. No. 4 with us commands the largest sale. Soft or old-fashioned (with us a specialty), and cohesive, but made from pure gold. The sale of soft and cohesive is nearly three to one; that is, we sell three ounces of soft gold to one of cohesive. There are dentists dealing with us who have never even tried cohesive gold, and to whom the very name is offensive." R. S. Williams says: "I make in gold for filling about one hundred and twenty-five different preparations, which include different sizes, shapes, qualities, etc., to which may be added a large number of special sizes, made for individuals, and not advertised. Probably the whole number would be about two hundred." Their report as to the kind most used is soft foil No. 4. James H. Ashmead & Son, give the following: "We manufacture two kinds of gold-foil, namely, soft and cohesive. No. 4 is used largely in excess of others, and soft foil is the most used. During the past fifteen years great improvements have been made in the process of refining gold, which we have taken advantage of, and all gold which goes out of our establishment is absolutely pure and of uniform working qualities. We give our personal attention to

refining all gold used for foil. The want of time forbids giving a complete sketch of the manufacture of gold-foil, but we will give you a few ideas: First, we obtain the gold principally in two forms, United States bar or coin. After going through the process of refining, the gold is melted in sand crucibles and cast in ingots about one inch wide, which are then rolled down to the desired thinness, according to the number of foil to be made. The ribbon thus obtained is rolled up and weighed for what is termed a 'beating,' which, after being annealed, is given to the workman, who, with a pair of dividers marks it into a certain number of pieces; then cuts the same up with shears, each piece being about an inch and one-eighth square, which when beaten out makes a leaf of foil. The process of beating, of course, renders the gold hard, and each sheet has to be annealed. A most important part of the business is to have each sheet receive the exact degree of heat. It is then trimmed, weighed up, booked, etc., ready for the market."

Edward Rowan says: "We manufacture two kinds of gold—rolled gold and beaten gold—and four varieties of the beaten gold, viz.: unannealed, cohesive, medium and soft; also a variety of gold rolls. There is more soft than cohesive foil used, and there is a much larger sale of No. 4 than of any other number."

Thus you will see history repeats itself. You will recollect that at first all low numbers were made; since then, we have had numbers extending as high as 480. We have had the sponge and crystal gold preparations. Cohesive gold had its run and was gradually laid aside, until now we come back almost to where we started from. You cannot but see from the letters just read that soft foil No. 4 is to-day more largely used than any other preparation of gold.

My experience is that with any form of gold, be it rolled or beaten, cylinders or blocks, foil or sponge, heavy or light, all alike require skill, patience and care. It also requires labor, practice and experience to properly work it. It requires an educated brain, guiding will and disciplined muscle to use it successfully. The student must often bear many crosses before his eyes behold the glittering crown. It requires not only time to learn to use it, but time to use it properly. None of them can be slighted with impunity.

DR. GERAN—I like the tone of the paper. It is a sort of register, and carries us back to the time when dentistry was in its infancy. It shows that we are a progressive profession, and I know of no other that has made the progress that this, our beloved dental profession, has made. Why is that so? It is because we have leaders who are leading us on higher and higher, and who will continue to lead us forward—such men as Dr. Atkinson and Dr. Bodecker, who are present with us to-day.

DR. BODECKER—*Gentlemen:* For my part I thank the gentleman very much for his very interesting paper, but I think the remarks he has made on soft foil are not entirely correct. Very many gentlemen profess to use soft foil, but when you examine their method, you will find that they are really using cohesive foil. Almost every one will carry the gold through the flame of a spirit lamp before placing it in the cavity; that anneals it, and then it cannot be called

strictly soft foil. In using soft foil as such, it ought not to be touched with the annealing lamp at all. It is an exceedingly fine preparation, and when it is put against the walls of the cavity without annealing, as many do use it, it makes a beautiful filling. But as regards the outer surface of the filling, I think cohesive foil is far better when placed there than soft foil.

DR. ATKINSON—Perhaps our differences in regard to gold may be due to a false denomination. Cohesive gold is the softest possible condition of gold. The non-cohesive gold is non-cohesive because of some foreign substance on its surface, or because of a harder film on its surface. With that correction, I, too, thank Dr. Brown for the beautiful excerpt of the history of the use of gold that he has brought before us to-day. As for the little fling about birds flying high and lighting low, that depends upon whether their wings are clipped. Heavy gold has not had its wings clipped. It has not been deprived of the power to make a filling in less time and more solidly than any other form of gold. If I want to do the very best work, I want at least 240 gold, and if the cavity is small and the walls very strong, I want 480. You will learn that the strength of the walls of the cavity and the resistance they will afford has philosophical bearing on this question. To any one who is acquainted with the laws of mechanics it is only necessary to suggest that and it will be understood. We are not feeling our way along now as we were when we divided the time between pulling teeth and shoeing horses and making plow-shares; that day has gone by; but let me tell you that the men who knew how to climb the ladder are the men who helped to build it up through all its successive steps; it is the old man who keeps his freshness who apprehends and appreciates these things, and who can condone the weaknesses that may come from wrong impressions and that militate against good results.

DR. ROBINSON—Perhaps I have failed to fully keep up with the new ways of using gold. When I began to practice, forty-seven years ago, it was with Bull's soft foil. At that time I was in Boston. We knew nothing about the cohesive properties of gold then, and, having learned the old way, and having tried to keep up with the new ways, I have formed the practice of placing soft foil to the walls of my cavities and then finishing with cohesive foil. Although I have no absolute means of knowing whether the Abbey foil would cohere, if passed through the flame of a lamp, as the cohesive foil does to-day, yet I hardly think it would cohere like crystal gold. But when we take into consideration the fact that gold raised to 400 degrees Fahrenheit throws out crystals that have been beaten down in the process of manufacture between the gold-beater's skins until they have lost the grabs that naturally cover the surface of it, so that they cohere to other pieces when brought in contact, then we have made the first step in the progress toward a solid filling. And I think it makes very little difference whether you use No. 60 or 120, or No. 4 folded so many times as to make that thickness, because after the filling is condensed you have substantially the same thing. I do believe, from what I have seen in my days and years of observation, that the dentistry of the former time, the time of

Harwood and Tucker, was, for hard service, nothing to compare with what we have to-day. That was partly because of the theory that prevailed at that time, and which was taught to me when I began practice, not to make any experiments. They said: Don't try to do anything that you are not sure of accomplishing, because if you should happen to fail you will lose caste; attempt only that which will give you credit, take no chances; dead men tell no tales; all teeth that you are not sure of saving, pull them out and cast them from you. That was the theory that prevailed, and I was taught to take hold with the forceps of everything that was a little doubtful, and pluck it out. They said: You cannot save all the teeth, and if you save 10 or 15 of them by filling the small cavities, you have done the greatest benefit and blessing that you can possibly do. But now when we extract teeth—well, we do not extract now at all: we take the old roots that we used to pull out years ago, and build them up with gold, or supply them with porcelain crowns; and I have teeth on both the lower and the upper jaw, placed over roots that were tolerably sound, that I have worn artificial dentures over for more than twenty years. So, instead of extracting teeth that are pretty bad, as we used to do, and that could have been saved had we known enough, we leave them in and place serviceable artificial crowns on them; and so we will go on from glory to glory until we shall stand before the Golden Gate and see the Golden City, and say, Praises be to the Lord forever.

Dr. Watkins—Dr. Robinson gave us a beautiful description of his work, and I think it would be well, perhaps, for him to tell how he does some of that work. He does some of that saving of old teeth with a material that is called Robinson's textile and fibrous metallic filling, I believe.

Dr. Robinson—I will not detain you long, because Dr. Atkinson told me the best plan was to be modest and follow his lead; which is true. Being satisfied that soft gold, with my own manipulation, would more thoroughly stop cavities in the cervical walls and in the buccal and lingual surfaces of teeth than anything else I could use, I used it. Then, when I found myself disappointed sometimes, and saw a hole burrowing under the filling, I said that something that would so stop this cavity and hermetically seal it up that it would not leak, was what I wanted and would try to find. I made a great many experiments to obtain a fibrous material that would recoil within itself, so that the filling would not recoil from the borders or margins; I thought that if there was a material that would recoil within itself and actually remain where it was placed, I could get better results. When a fibrous metal has no recoil to it, it stays where you place it. These fibres do not have any possible connection one with another, only under pressure, but when placed in a cavity, either by hand-pressure or the mallet, until the walls are hermetically sealed at the bottom, it bears the same relation, in my opinion, to the filling, that the grouting does to the wet places in the sub-structure of a building, which is better than solid granite to hold the superstructure. Having filled the greater part of the cavity with this material, I then put the gold upon it, which coheres,—

not exactly coheres, but adheres; as when we put whitewash or kalsomine upon a wall, the particles of the material cohere, and the material itself adheres to the plaster. And so the crystals of the gold and the crystals of the fibrous material become interlocked and interlaced until they are so united that you cannot separate the gold from the fibrous material, which I call Robinson's fibrous and textile metallic filling; and this combination makes a better filling than can otherwise be made, whether you use fine foil or thick foil. When this material is covered with gold, the gold bears the same relation to the filling that the steel facing of a hammer bears to the iron hammer; you have the same qualities that you would have had with gold alone, and the filling is made in a quarter or an eighth part of the time that would be required to do it in any other way. And you have a better result; you can depend upon it under pressure, and you have an absolutely hermetically sealed cavity. This material is not a plastic material; it is fibrous, and adhesive by being interlocked, and the gold is interlocked with it in the same way. It is somewhat new here, although it is not new in Chicago and Detroit, where it has been in use for three years. I find it harder to introduce things at the East than it is at the West; perhaps the Western men are more supple, they are not adamant, and you can make an impression on a Chicago man quicker by 100 per cent. than you can on a Boston man. I found in the dental offices of Boston, men who claimed to be good operators of the old soft foil type, who had never had a rubber dam on a tooth and never had put rubber in the mouth, and who say they would not use it. I also found men who claimed to be good operators, who have never used a dental engine, but who continue to operate in the primitive way of fifty years ago. What we want is a new method of the old plan. Let them try the new, and then they will know of the doctrine, whether it be true or false.

DR. MEEKER—I make a motion to pass this paper, and in doing so I will state the reason. Dr. Buttner has his patient here, he is ready to perform his clinic operation of placing two of his crowns, and the lady is compelled to go home at five o'clock; therefore I move that we now adjourn.

Adjourned until 8.15 o'clock.

## EVENING SESSION.

President Palmer in the chair.

DR. J. W. SCARBOROUGH read a paper entitled

## LOBELIA INFLATA AS A THERAPEUTIC AGENT.

The power to remove disease and restore health to the system is inherent in the constitution of man, and any medicine, agency, or appliance is of therapeutic value only as it possesses the power to stimulate to normal activity the prostrated functions of the diseased body, without detriment or injury to any part thereof. Therefore,

in the fear and belief that a large part of the disease and infirmity among the people of our day and time is due to the existing popular system of dosing and drugging for every ache and pain that afflicts humanity, I desire to call our attention to the importance of investigating those systems of treatment and all remedial instrumentalities where medicines are not used, which are recommended by those who claim to be reformers. And first in efficiency, I would name the "magnetic system," human magnetism, imparted from physician or healer to patient by manipulation, which sometimes so vivifies and quickens the vital forces as to effect a cure in a marvelously short space of time. I have seen these speedy beneficial effects in my own family, and heard of them from the lips of many, very many, grateful patients, who had been long sufferers under drug medication, as well as from physicians and healers. I trust most of you among the older practitioners have had ample evidence of the power of this magnetic presence in your daily practice, if your experience accords with my own. I have had patients of a negative receptive condition, who seemed to sap the life force out of me, leaving me utterly exhausted after a protracted operation; and others of strong positive natures, full of magnetism, would impart that force, and I would become stronger and stronger the longer I operated; thus showing the unconscious influence our magnetic presence exerts one upon another.

Then we have the hydropathic system, the varied uses to which water, the great detergent, can be applied and made remedial. The movement cure, by which friction is applied, and the muscles toned up by active, daily exercise, and fitted to perform duty. The electro-vitopathic, by which vitality is supposed to be stimulated to increased activity by passing currents of electricity through the body, etc. And thus I might go on enumerating systems and methods, each one of which may be thought by its advocates to be all-sufficient, and as we enlarge our thoughts by extending our investigation into the claims of these, we will surely find that there is, in the vast arena of nature's domain, a power competent to eradicate disease, in many cases, without the use of medicine at all.

Let us not, however, fail to inquire into the older systems of medical practice, for some good, some truth, will be found in all. It will be seen, from this preface to my subject proper, that I am opposed to the very general use of medicine, and this opposition is because of there being used so much that is of injurious tendency: the drastic purgatives, the powerful anodynes, the harsh emetics, etc., administered, as I conceive, upon a false theory of cure; but I cannot take the space to give you the why and the wherefore of my reasoning upon this point. I cannot, however, feel at liberty, with the light that I have, to lay aside the use of medicine entirely, for emergencies sometimes arise, not only in the family circle, as in cases of fits, spasms, or convulsions, cramps and colic pains, locked-jaw or tetanus, violent attacks of asthma, etc., but also in the dental office, accompanying and following the administration of anæsthetics, when the means above spoken of are not at hand, and when it is absolutely necessary that something of decided promptness should

be known and used, that the patient's life may be saved. It is this last named emergency, especially as I have had it occur in my own office, that induced me to write upon this subject, for I have found *Lobelia inflata* prompt and effectual in counteracting the prostration from anæsthetics.

The plant is perhaps too well known by you all to make a full description of it necessary. Suffice it to say, that it is a biennial plant, indigenous to the North American continent, growing spontaneously in old pasture-fields, meadows, along the borders of woods, and along the roadsides. It is from twelve to eighteen inches high, with a fibrous root, and a hairy, solitary, erect and angular stem, much branched about two-thirds of the way, rising considerably above the summit of the highest branches. The flowers are blue and appear toward the end of July, and continue to expand in succession until frost. The pod is an oval, inflated capsule, containing in two cells numerous very small brown seeds. When wounded or broken, the plant exudes a milky juice, possessing active emetic properties. All parts of the plant are possessed of medicinal activity, but the seed, leaves, and inflated capsules, are the parts used as medicine. Its therapeutic properties are emetic, stimulant, antispasmodic, diaphoretic and relaxent. The result of experiments made by Mr. William Proctor, a chemist of Philadelphia, proves the active principle of lobelia to be a volatile alkaline substance. It has been named lobeline. Mr. Proctor obtained some of it, and administered a large dose to a cat. The animal become sick and very much relaxed, and remained so several hours. After the effect passed off, the animal was well, and ate as usual.

The idea of lobelia being useful as a medicine, originated with Dr. Samuel Thomson, who observed its powerful and beneficial effects upon a man in bad health, who had swallowed some through motives of mere curiosity. The man (as the cat) became very much relaxed, vomited freely, sweat profusely, and in a short time after ate a hearty dinner, and declared that he never had anything to do him so much good. This circumstance induced Thomson to make a trial of it for cleansing the stomach, which resulted in the conviction that it possessed important medical properties, that it was powerful in removing disease, and harmless to the system. I can bear testimony to the truth of this last declaration. My experience in its use has been somewhat extensive, and I have yet to find the first evidence of any injurious effects. The efficacy and safety of lobelia is testified to by Professor Tully, of Yale College. Dr. Eberly, in his *Practice of Medicine*, speaks of it as a remedy for whooping-cough, croup, asthma, etc., and as being valuable as an emetic. Dr. Cutter cured himself of the asthma with it, and it is regarded as a specific for that malady by many others who have written upon it. Dr. Waterhouse, for many years a professor in the medical department of Harvard University, observes: "I have had ample proof of the efficacy and safety of lobelia in a number of cases, and have reason to value it as equal to any article in our Materia Medica. I not only give it to my patients, but take it myself, whenever I have any occasion for an emetic." And so I

might continue to quote medical authority in proof of the value of *Lobelia inflata*, as a safe, salutary and efficient remedy, were it necessary; but these facts are so well established by the thousands who have tested it in their own cases, and by every one who has had any practical experience in its use, that nothing more seems to be needed.

Very unlike this is the operation of *tartarized antimony* or *ipecac*, which, when taken to produce vomiting, and failing, leave the patient with a distressing nausea that is not gotten rid of, many times, for several days. Fatal effects are not an infrequent result of taking it in too large quantities. Dr. Physic, of Philadelphia, prescribed an antimonial preparation for an emetic for himself. It was prepared according to his own direction, and administered by other physicians. It failed to operate. The result, his death. The autopsy revealed the fact that five places were eaten through the inner coats of his stomach by the antimony, which had settled upon those points. In contrast, let us see the action of lobelia, in the case of a young man who was crippled up with stiffened rheumatic joints of weeks' standing. I was directed by another to give him an emetic of lobelia, in combination with other stimulants. I administered as much as four ordinary emetic doses. It failed to operate in the usual time. I left the patient at 9 o'clock in the evening, disappointed, but without fear as to his safety. The next morning I found there had been no vomiting, but there was a natural action of the bowels (not the prostrating action, as of physic, for the agent in question will not produce that effect). The rheumatic joints were limbered up, the appetite called for food. The young man was much better in all respects, and in a week's time was well. Though it is comparatively rare for lobelia to fail to produce the emetic effect, I have known of numerous instances of the kind, and have had other like experiences myself, but have never known of a single case where it has caused the slightest injury to the patient, on account of not producing the wished for emesis.

Which of the two agents, then, will ye choose for the safest and best? The herb is prepared for use in three different ways, and may be prepared and compounded in many others. First, the powdered leaves and pods. Second, a tincture, made from the green herb with spirit. Third, the seeds reduced to a fine powder, and compounded with *Capsicum baccatum* (cayenne, or bird pepper), *Cypripedium pubescens* (American valerian or nerve root), a nervine, gum myrrh, and brandy with the alcohol boiled out of it. I need not describe particularly the proportions of the different ingredients, or the method of compounding, as these preparations are carefully prepared of the best material, and kept on sale by Aaron Comfort, at his botanic medicine store, No. 17 North Eleventh street, Philadelphia, at a price cheaper than one could prepare it in small quantities for his own use. The first two preparations are for the more mild forms of disease, and the third for violent attacks. It is a powerful antispasmodic, producing almost an electrical effect. While I believe this agent has a wide range of usefulness as a general family remedy, I will not lengthen my paper by discussing it in that aspect very much, but simply endeavor to show the power

and influence of this "third preparation of lobelia," in its application to violent cases. And I can do this in no better way than by relating to you the most alarming case that I ever knew, occurring in my own practice some eighteen years ago. The patient, a maiden lady, of about twenty-five summers, called at my office and requested me to administer ether, and extract her upper and part of her lower teeth. Our persuasions against the use of ether failing, we proceeded to administer it. The first two or three inhalations caused spasmodic breathing, which subsided after a few inhalations of pure air, when we continued with the ether, until complete anæsthesia was produced, when the upper teeth were all removed. Consciousness and sense of pain then returning, we advised her to wait a week to recruit up, before having the lower teeth removed. This was done because we did not like the disturbed respiration in the beginning of the operation. We accepted it as a warning to be cautious. The patient left for home as well as is usual in such cases. In just one week she returned for the next operation. Ether was administered, and again the first two or three inhalations disturbed the breathing, as before, and again a few breaths of pure air were admitted and natural breathing was resumed. The rest of the operation was proceeded with precisely as on the former occasion. The teeth were all removed except one difficult root, which broke off in the effort, consciousness returning to disturb our operation. While thinking a few seconds whether to administer more ether and remove the root, or let it remain, our course was quickly determined upon by a sudden paroxysm of breathing, the patient making quick efforts, but apparently unable to inflate the lungs at all. And this, too, while the blood was flowing from the gums, which in itself is calculated to relieve spasmodic action. Hence we regarded it as a serious indication, and hastened to our trusted remedy, the third preparation of lobelia, and gave her about ten drops, or one-third of a teaspoonful, in a teaspoonful of cold water. This relieved the trouble immediately. Fearing, however, that a trying emergency might be at hand, we thought best to prepare for the worst, and dispatched a messenger for some warm water, as the proper way to prepare this medicine is to put it in twice its bulk of warm water, sweetened a little, that it may be more palatable. Our fears were fully realized. Simultaneously with the return of the messenger, came another paroxysm, more severe than the first. Then a teaspoonful was given, and the relief was instantaneous and complete for the time being, but in two minutes more the spasm was on again, and we gave a tablespoonful dose, which was no sooner swallowed than the breathing became normal. Our case was now becoming desperate. The two women attending were alarmed, and wished a physician sent for, but we assured them that the patient would either be dead or past danger before a messenger could get many rods from the door. Our purpose now was to relax the system as speedily as possible, and as thoroughly, and thereby enlarge the caliber of the vessels, and expand the perspiratory system, that the ether might find more ready egress through those great emictories of the exterior of the body, established by nature for the elimination of ethereal,

effete substances therefrom. We prepared the fourth dose of one and a half tablespoonfuls (one tablespoonful being an ordinary emetic dose). In a moment nature was again making spasmodic efforts to keep the breath of life in the lungs, and the medicine was swallowed, and relief obtained. Still no nausea, no relaxation visible. The nervous energy and vital force were so thoroughly prostrated by the ether, that the medicine, thus far, seemed only to relieve the spasms, without producing the general result desired. Courage and perseverance kept pace with the requirements of the moment. We stepped behind the screen to the laboratory and shook up the lobelia bottle and poured out two tablespoonfuls, with the sediment in it, for the fifth and last dose. We barely got it ready, when the attendants excitedly called us, and, hurrying to the patient, behold the scene that presented itself. There she was, reclining in the arms of her attendants, with the head thrown back, the leaders contracting; the arms raised, and fingers partly closed by contraction of the leaders, and becoming purple; the face and lips also presenting that purple tint; the breathing scarcely perceptible. My first thought was, she cannot swallow, but knowing the almost electrical power of this agent, we poured a little in the mouth between the cheek and tongue, and when it reached the glands and came in contact with the sub-maxillary and sub-lingual plexus of nerves, it soon relaxed the spasmodic condition—a condition of rigidity almost amounting to that of tetanus; stimulated the action of deglutition and passed on. Then the whole dose was given, and the relief again complete. In a moment she vomited a very little, and then desiring to lie down she was permitted to do so. So great was the exhaustion, that almost the very moment her head touched the pillow she was sound asleep. We watched her closely. The respiration was normal and continued so. In from three to five minutes the systemic effect of the medicine was discernible. There was that peculiar pallor of the lips, and slight tremor about the mouth indicating nausea, and in two or three minutes more she roused up, sick enough, and thoroughly relaxed, and vomited freely. This ended the trouble, and she returned home in about an hour from that time, and had no further recurrence of unpleasant symptoms.

I have been particular in describing this case, because it seems to me it might justly be called, one of the fatal cases from anæsthesia, *rescued* when within a *single minute* of the grasp of death, by the magic power of this searching remedy. I firmly believe that nine-tenths of the fatal cases might be saved by the prompt and judicious use of this compound preparation of lobelia. I could not feel that I was doing justice to my patients, nor exercising proper precaution in their behalf, if I administered an anæsthetic without having this at hand, though I never had but two other cases in all my twenty-two years of practice, that required more than doses of five to fifteen drops as an arterial stimulant. By using it, no risk of injury to the patient is incurred. It is perfectly harmless, though powerful as a remedy; operating simply by stimulating the sluggish functions of the body to renewed activity. I should add in connection with this case, that during the period of relaxation scarcely any blood was

flowing from the gums, showing that it does not increase hemorrhage, but on the contrary, the elasticity it produces, especially in the coats of the arteries, facilitates the exudation of that plastic lymph which closes the extremity of the ruptured vessels. In these cases where the hemorrhagic tendency is so great that the blood not only flows from the vessels ruptured by extracting teeth, but oozes out through the membrane of the palatine arch and gums, I have no doubt, that placing such patients under the influence of this agent would speedily arrest that kind of capillary hemorrhage.

Now, I will briefly relate a little of the previous history of the above described case. After the operation was through with, I was informed that the lady had a severe turn with the measles, eight months before; that they left her with a weakness of the lungs, and a dry, hacking cough; that her physician had told her not to take an anæsthetic when she had her teeth extracted, under any consideration; that if she did, it would be at the risk of her life; that the lady with whom she lived had used her utmost endeavors to dissuade her from taking it; that her family and friends had all pleaded with her in behalf of the safer course. And yet, in face of this opposition and this warning, she came to me with a determination to keep me in ignorance of these facts, in the hope that I would give her ether, reasoning in this wise: that she could not live with the teeth in her mouth, they were causing her such racking pains and sleepless nights; that she could not have them out without "taking something"; and that if she died in the operation it would be but a small loss any way. She managed to shut the mouth of the lady who brought her, and to keep from my ears the slightest hack or cough. On my inquiry as to the state of her general health, she replied: "There is nothing the matter with me, I am all right." Her pulse was full and normal, and I think no one would have made an unfavorable diagnosis of the case. Of course, the lung weakness could have been easily detected, by auscultation and percussion, especially by baring the chest, but that thoroughness of examination would be considered officious, unless there was a more manifest reason for it than appeared in this case, the patient looking the picture of health. The sequel you have heard. I can never forget that fifteen minutes, the time from the commencement of the spasmodic disturbance to the final safety of the patient. It was, I assure you, the most anxious, the most trying fifteen minutes of my professional life.

Now, there is a lesson of usefulness to be learned by this case. It is this: That we cannot rely implicitly upon the representations made to us, and inferences conveyed by the strangers calling upon us for professional service; that we are liable to be deceived, and led into mistakes, as I was in this case, which, had it proved fatal, would probably have driven me from the practice of dentistry; that in view of these facts, it is proper that we should be prepared at all times for the worst class of emergencies that ever occur; that we should study the merits of all modes of treatment suggested, and select that for a trial which promises the best results. I do not say that there is no other agent, or combination of agents, capable of

producing the favorable results brought about by lobelia in this case, for I do not know; but if there is, I have not yet made its acquaintance. But of lobelia I speak from a long experience in its use, and I can but regard it as a most reliable therapeutic agent. The most certain antispasmodic for the class of cases here described in the *Materia Medica*, known to me. But yet, my motto is, use no reputed remedy, however harmless we may think it is, if we can see any possible way to get along without it.

DR. LUCKEY—I would like to ask the Doctor whether there is any point where he would stop giving the remedy in case no nausea was produced? He states that he gave it five or six times in increasing doses, the last dose being two tablespoonfuls. Is there not some limit at which you would stop, in case there was no nausea, this side of death?

DR. SCARBOROUGH—I would stop when the conditions requiring some relief ceased, certainly. With regard to the patient whose case I described, I am postive she would not have lived two minutes the last time if I had not administered the final dose. I have seen this medicine relax locked-jaw. When it was poured through the teeth the jaws sprang open immediately. It has an electric power that is possessed by nothing else that I know of in the whole range of Materia Medica. I will say here that I am opposed to dosing and drugging and drastic purges. I could give my reasons for opposing physicking; I have good reasons. But this medicine I speak of is not a physic; you cannot physic a man with it. If there is something in the stomach that nature wants to remove, it may produce that effect, but when the system is cleared out you cannot physic with it, it will not act as a physic. In some of the works I have read, lobelia is said to be a poison, which I do not believe. Physicians use this agent for relaxing in cases of fever, in small doses, not nauseating, emetic doses; but use as much as they can, keep a patient under the influence of it by the week, and it will not act as a poison. My physician kept me under it for two weeks when I had typhoid fever. It certainly is not a poison or it would be shown to be so under such circumstances as that.

DR. HAYHURST—Suppose that the two tablespoonfuls had not produced the desired effect, and you had gone on further, would it have come to a point where it would be injurious to the patient?

DR. SCARBOROUGH—I should not have increased the dose beyond that, that was about four emetic doses then. But the agent does not kill. I started with ten drops, which gave relief. Then within a short time, the spasms returned again, and I had to increase the dose. The medicine relaxes the whole system and opens the pores, letting the ethereal substances out through them. I think the ethereal substances are eliminated through the pores of the system quicker than in any other way.

DR. ROBINSON—Does it produce nausea on the patient?

DR. SCARBOROUGH—It did finally in this case; but this patient was so far gone that the medicine could hardly produce any effect of that kind.

DR. WATKINS—The last dose did produce considerable nausea?

DR. SCARBOROUGH—She was slightly sickened, and threw up two or three mouthfuls, and then laid down. Afterward she vomited thoroughly, and as soon as she did so the trouble was ended.

DR. ROBINSON—What portion of it will produce nausea in a patient that has been under the influence of ether.

DR. SCARBOROUGH—If the patient's stomach were in pretty good condition, it would take about double the quantity it would if the stomach were out of order. It stimulates an action that enables nature to throw off anything that is offensive. It will hasten a movement of the bowels if there is a superabundance of matter in them that nature wishes to remove.

DR. READING—At what stage was that spasmodic action started?

DR. SCARBOROUGH—It was the very first thing that manifested itself.

DR. READING—How did you administer the anæsthetic—through a funnel?

DR. SCARBOROUGH—I moistened a sponge and placed it in a funnel-shaped napkin, held in the hand.

DR. G. CARLETON BROWN read the following paper:

## THE CURSE OF MODERN CIVILIZATION.

I have a little matter to call your attention to, which I think is one of the most vitally important questions of the day, not only for the D.D.S. and the M.D. to consider, but for every intelligent, thinking human being, and because it is not so considered is the reason I have called it the Curse of Modern Civilization—white flour. My object in writing this paper is to call your attention to the minute anatomy of a grain of wheat, and by this examination to gain, if possible, a little light on the subject of phosphate food. If I can in this way get you to thinking on the subject, and then we all by a combined effort be enabled to start the reform ball rolling, I shall think that we are on the true road to perfection, the preventive rather than the curative, and who knows but that it may be the destiny of the dentist, by his researches and conferences, to finally point out to suffering humanity the true elixir of life—health without physic.

Let us look at the construction of a grain of wheat.

Fig. 1 represents a grain of wheat in its natural state, with the husk and fibrous beard on. This husk is the only indigestible and innutritious part of the grain, being composed of silex and woody fibre; if this be carefully removed, you will find the grain as represented in Fig. 2.

Fig. 3 represents a section of the grain highly magnified; 1, 1, 2, 3, 4, constitute what is commonly known as bran; 1, 1, 2, being the husk, and 3, 4, 5, 6, containing the food elements, which can be more easily seen in Fig 4.

Nos. 1, 2, 3, 9, constitute the outer husk and fibrous beard.

Nos. 4, 5, 6, 8, constitute that portion of the wheat wherein reside nearly all the mineral elements.

No. 7 represents the starch cells, and constitutes about seven-tenths of the entire berry.

The starch has no properties capable of building up the system and repairing its vital waste; its only action is as fuel, and, with fat, it supplies the heat which is necessary to keep up the steam. To carry out the illustration, Nos. 4, 5, 6, 8, supply the water for the steam-engine, from whieh the steam (vital force) is formed, and you are all aware of the effects of a hot fire under a boiler with no water in it. This is just the condition when only fine flour is used. The entire outside of the berry down to the starch is removed, and they send us hell fire in the beautiful disguise of white flour.

An analysis of wheat and white flour gives the following result from 1000 parts of substance:

Wheat has an ash of.....17.7 parts.
White Flour has an ash of...4.1 parts—an impoverishment of about ¾.
Wheat has.....8.2 parts phosphoric acid.
White Flour has.....2.1 parts phosphoric acid—an impoverishment of about ¾.
Wheat has.....0.6 part lime and 0.6 part soda.
White Flour has.....0.1 part lime and 0.1 part soda—an impoverishment of 5-6 in lime and soda each.
Wheat has.....1.5 parts sulphur—White Flour has no sulphur.
Wheat has.....0.5 part sulphuric acid—White Flour has no sulphuric acid.

A Boston physician, in a paper read before the New Hampshire Medical Society, made the following statement:

"I became alarmed at the decay of my children's teeth. I queried dentists and others as to the cause, and settled down to the conclusion that there was something wrong in the bony elements of their food. Subsequently, Dr. Nichols, editor of the Boston Journal of Chemistry, brought to my notice some comparative chemical analyses of wheat and flour, showing the great deficiency in the latter in mineral ash. I was then using in my family a celebrated brand of flour called 'Peerless.' I took this flour to the State Assayer, Prof. Sharples, of Boston, and had him analyze it. He reported withdrawal of seventy-five per cent. of the mineral ash in wheat." And he furthur says, "I still think that, had I not had this analysis made and paid for it, I should not have been so thoroughly convinced as I now am, of the terrible impoverishment in flour."

Majendie, in his experiments on this subject, found that dogs fed on white flour died in about forty days, of starvation, while dogs fed on flour made from the entire wheat throve and grew strong.

The question now is what shall we do for a substitute, as I think I have proved to you that white flour is not a proper food for human beings, and as I do not think it necessary to call your attention to what you all see every day in your offices—that is, the lack of the phosphates and nitrates in our patients, especially the children—I take it for granted that you all feel the want.

Let us look for a substitute.

Oat-meal has been a great help to us, but you will all agree that it does not come anywhere near what is required.

Graham flour has been used and considered a good article, but if we look at the way it is made we will have to discard this too.

There are two improper ways of preparing brown flour; the first is by grinding the wheat whole, so that the indigestible and irritating husk (which is not only unhealthy in itself but contains the eggs and larvæ of insects) forms part of the flour, and is certainly injurious; the other way is by mixing poor white flour with bran, and the result is the same.

Meat and vegetables contain the same elements to a certain extent, but there is no other food that combines them like wheat, in nearly the exact proportion in which they are contained in the human system, so that it is evident that wheat was intended for the principal food of man, and the only way to get its whole virtue is to remove the outer husk and grind all the rest; this will produce a dark flour, varying in color with the soil in which is grown the wheat from which it was made.

THE PRESIDENT—You have heard this very good voluntary essay of Dr. Brown, which is now open for discussion. Dr. Atkinson, won't you wake up and say something to wake up the boys and encourage Dr. Brown.

DR. ATKINSON—I think it is a very commendable effort. It is a recapitulation of some well-known facts with regard to the constitution of the berry of the wheat, which is the basis of our wheat flour, and the statements made in a mass way are well enough, but the execration of the carbonaceous portion of the berry is, I think, uncalled for, for the reason that fuel is as necessary to the production of steam as water is, and it is hardly fair to say that starch is a detrimental agent, inasmuch as it must be fermented in the human body until it shall have been converted into glucose, which is a form of sugar; and it may be emulsified, and is supposed to contribute some to the production of fat.

The question is one that is too deep for us to take hold of seriously unless we know more about it than we know in mass. Even the men who preside over our health boards and who have charge of the inspection of foods are at loggerheads with regard to this question, as well as with regard to the subject of the paper that was read before it. Sometimes it is difficult for us to detect the real antecedent of the change that we speak of when nutrition is dealt with, for the reason that the condition of the body to be fed is one of the prime considerations in the administration of remedies. We need to be wide awake—and the President spoke justly, for I was sleepy—to catch the true significance of the changes that are undergone in the digestory apparatus by these substances which may be either foods, poisons, or remedies. And here I want to warn you against the nomination of almost all the text-books, and advise you to take in their stead this simple statement: that anything that is capable of acting upon the living human body has either to help or to arrest the nutrient changes that are going on, and may be, according to

the demands and necessities of the body, either a food, a poison, or a remedy. And when we classify these substances as foods, poisons and remedies, I would do it in this way: lobelia is one or the other, according to circumstances; carbon is one or the other, according to circumstances, and so on. We are too gratuitously hypothetical in our general classification of the proteinaceous elements, hanging ourselves with conditions of hypothetical molecular metamorphoses, which hypotheses are often but partly legitimately made, without surveying the field far enough to take into account all its elements, so that we might see it in all its bearings and be able to say a hearty yea or nay to the proposition before us. Dentists ought to know all about this, but we will never know about it until we become histologists and are thoroughly acquainted with the various changes and operations of the different organs of the body; we must become histologists in order to understand the *modus operandi* of the flowing together of the positive "semen," so-called, and the negative "germ," so-called, or what I denominate the two semens. Whether in plant or animal, these two conditions that we call positive and negative, and which hold a definite relationship to each other, must be awakened and engaged in order to form a new body; which new body is a true germ, holding within it all the possibilities of the genus, species and variety of the parent bodies from which it sprung. The germ of the wheat, of which we are speaking, is created by the flowing together of the fluids held in the pollen and the pistil of the parent grain, the positive and the negative conditions or semens; and the process of such creation is precisely the same in principle as it is in the embryo of the animal, that is to say, the vivification of an egg.

These are the basic principles of embryology, and are understood by but very few, and even those who do understand them are so little awake—I thank the President for that expression—that they have not the mental clarity to discriminate the evolutionary processes involved in the alternations of the generations of the germs as starting-points and foresteps of the tissues, organs and systems. The musty tomes that we have to go through in order to get our degrees give us very little assistance; and yet the teachers, who claim to have a knowledge they never possessed, say to us, believe this or be damned. I would rather ask a pupil something entirely foreign to the text, and see if he would apprehend what was involved in the question, and, if he showed that he was really in possession of the knowledge, pass him without his answering a single question in the red letter list, which ought to be damned morally, religiously, socially and scientifically.

This is a vital question. The outer husk of the berry of the wheat may be neither detrimental nor uselesss. You must have effete matter in sufficient quantity to make a bole, or mass, of the pabalum, so that the vermicular motion of the intestines can pass it along, the absorbents taking up the fine pabulum, the excess and the effete matter being discharged at the terminal gut. It is the fine pabulum that feeds the tissues. We say pabulum. Some will say that means chyme, others that it means chyle, and others still will

say it means blood. It really means the product of the complete digestory process, after the food has gone through the minutia of the churnings necessary to prepare it for appropriation. By this churning process the sleeping energies that are confined in the body are awakened and engaged, and by that awakening and engagement it becomes a neural mass.

Take certain quantities of oxygen and hydrogen, put them into a receiver, and pass a current of electricity through them from the positive to the negative pole, and that does the courting and marrying both, and makes the hydrogen and oxygen cease to be gases and become a liquid which we call water. Then reverse the current and they are again gases. These gases combine only in a definite proportion, which is two of hydrogen to one of oxygen; and when we shall have the combinations of the elements of food whittled down to as fine a point, we will then understand the process by which those great masses of food material are emulsified, churned, mixed, carried through the chyliferous duct to the sub-clavian vein, and from there to the lungs, where it is calorified and converted into blood, to be distributed through the capillary system wherever it is needed. It is never pabulum until it has been oxygenated by passing through the lungs. Pabulum is the proteinaceous substance that has been chemically formulated as CHNOP+. If you are a chemist you will understand that without going further. You see what an immense subject we have before us. You can scarcely touch any question with regard to the organization of this beautiful temple, the human body, without being made wide awake and desirous of understanding more about its highways and by-ways and those unseen processes of the conversion of food into pabulum and pabulum into tissue. And if we wish to understand the awakening of the energies of functional bodies, we must go to the sun, which is the source of light and life, the god that vivifies and awakens the planetary energies, the source of all the power that operates in the planetary system, as well as in these beautiful functions of our bodies, as seen in the flowing together of the two semens, which produce a germ, which holds within it all the potentialities of the type from which it sprang. The sun is the power that moves the universe, of which we and the earth on which we dwell are but a speck; and yet we consider ourselves such great men. In an infinitesimal degree we are infinite; and out of the mouths of babes and sucklings shall, by inspiration, come perfect praise. Atkinson says that without inspiration no man can possibly understand. It is the inspirational influx that awakens the instinctive energies that lie dormant until they are awakened and engaged, that arouses these minds of ours, and gives us these magnificent conceptions that make us different from the savage; and this curse of the nineteenth century may prove to be not a curse but a blessing, if it awakens our attention to these subjects, and leads us to investigate them, so that we may understand how to so feed and raise our children that they shall never have any need of dentistry, surgery or lobelia.

PRESIDENT PALMER—We are glad Dr. Atkinson got awake.

DR. G. CARLETON BROWN—I do not want to be misunderstood as

saying I would reject the starch or carbon of the wheat. I think that would be just as bad, if we had only the phosphates without the carbon. If we have water without fuel, we are in just as bad a fix as we are when we have fuel without water. But I do think that we need the phosphates above everything else at the present time, in view of the condition of our teeth; there, at least, the phosphates are greatly needed. Dr. Atkinson says that if we have good, well-organized teeth we will have no need of dentists, and I say this is the road we will have to travel to reach that condition. If we burn the fuel without the water, if we eat the carbon of the wheat, to the exclusion of the outer shell, which contains the phosphates, we are bound to have a break down.

DR. ATKINSON—We are bound to have a break down if we disobey the laws of our organization, as evinced in the case of a dear little boy whom I examined to-day, who had had too good a time. If necessity had compelled him to black boots or to pick up refuse out of ash-barrels, it would have been better for him. We need vigorous exercise to develop the various organs and make room for the teeth in the jaws and stimulate the digestory apparatus, so that it can take hold of and manage the different varieties of foods and combine them into the homogeneous heterogeneity that we call pabulum. Your babies are raised in such an artificial manner that they are not supplied with the natural oil on the surface which is necessary to keep them in good condition. It would do them good to rub them with oil all over. Rub vaseline over your babies, because its affinity for oxygen is already satisfied, and they will not have chafed legs or in the clefts that are represented by the bulbous portion of the wheat kernel there. And when your children want to chew sticks and play in the dirt and make mud pies, let them do it. And if they have no taste for that, get somebody else's child who is accustomed to it to play with yours, and it will soon teach them to do things that you call dirty, and they will thrive, and will convert into good pabulum food that would be rejected in every decent house in the land. When you understand these molecular changes, you will know that hunger is not in the stomach at all. The stomach can only be hungry for its own tissual elements, and not for the food which is put into it, much of which is effete matter that is never assimilated at all. The effete matter is burned into water and ashes, and the ashes are dissolved in the water, and that is lye. Yes, and the old ladies will tell you it is chamber-lye—and we call it pis.

DR. WALLACE—I am a great lover of good bread, but I think I can safely say that I have not had five hundred pounds of white flour in my house in ten years. I was exercised somewhat on this subject ten years ago, and I have read considerable about it. There are two kinds of wheat, the red and the white. There is not as much pains taken with the red wheat flour in its manufacture as there is with the white wheat flour; it does not go through the same refining and bolting process, which takes out the nutritious elements, that the white wheat does. I have learned that from millers. Since we have used the red wheat flour we find that it makes better

and sweeter bread, that will keep moist longer than the white wheat flour bread; and this is because all the better part of the wheat is extracted in the process of manufacturing the white wheat flour. I do not want to get a corner on red wheat, because I buy it myself, and get it much lower than white wheat is sold for. I use it simply because I know my family are in better condition, especially my children's teeth, than they were before we commenced to use it.

DR. ATKINSON—Let them chew the wheat into a gum, and keep masticating it all day if they want to; teach them to do it; it is one of the best things for children's teeth and jaws. Spruce gum is also good. Let them chew that gum, which is deprived of all starchy matter; the exercise develops the jaws and makes room for the teeth.

DR. ROBINSON—This is a very profitable subject, and the paper is very instructive, but the trouble lies further back. The fact is, a man does not take as good care of his children as he does of his horses, because they won't bring him as much money, and that's what is the matter. If it were possible for us to understand as much about the economy of the human body, which has been so beautifully illustrated by my friend Atkinson, as a Michigan farmer understands about the growing of wheat, there would be a great improvement in men. When the children come along, their parents feel that they must take care of them, and they try to get rid of having them, because it costs money, and if they do happen to get one it is looked upon as an unfortunate accident. I come from a wheat country and I notice that when the land there becomes impoverished they understand enough of chemistry to know that when they sow and plow under a crop of clover it reaches down its long fingers and takes up the lime and phosphates which enter largely into the composition of the berry of the wheat, and that at their next wheat harvest they will have the big, fat berries that will bring money. But they do not care to grow plump and rosy children, because they will be an expense rather than a profit; but the wheat, which is going to swell their coffers and make them grow rich, they are more interested in producing, and they produce the best. They study the chemistry of the berry of the wheat, and not the chemistry of human life. When we pay as much attention to the economy of our own lives as we do to the raising of what will fill our barns and bring us money and make us grow rich, and enable us to follow the fashions as we do, then we will have a different state of things, and the world will be fit to live in, and we will be fit to live in it.

DR. WATERS—One question I would like to ask Dr. Brown in regard to this matter of the conversion of grain into flour. Dr. Robinson has spoken of the farmer repairing his land so as to get the most from it; but this trouble lies not so much with the farmer as with the miller; it is the preparation of the grain for the market that we have most reason to find fault with. The farmer prepares his land for producing the most berries of wheat, so as to increase his pocket-book, and the miller prepares his flour with the same object in view. I am not sufficiently conversant with the prepara-

tion of flour to explain how it is done, but I remember that when I was a boy my mother used to make such sweet bread, and the flour we had then was not prepared as the flour we get now is; it was ground in the old-fashioned mill, with coarse burstones run by water, while the flour we get now is ground by steam, if I am rightly informed.

DR. ROBINSON—It is not ground at all; it is rolled.

DR. WATERS—Well, it is rolled, and broken down, and for some reason we do not get the phosphates, but merely the starchy matter. Dr. Brown has gone into this subject; perhaps he has investigated the process of manufacturing flour and can explain it.

DR. G. CARLETON BROWN—I have looked into it a little. There are various ways of preparing flour. One process is to steam-heat it in some way, and then remove everything but the inside or starchy part of the berry. With the old grinding-stones they got the perfection of flour. There is a new process of making flour—a new mill called the Franklin Mill, I think, is making it—in which the outer husk only is removed, and the rest of the berry is ground into flour, but there is no heating about it, the grain is not heated in the process, nor any of its nutritious properties destroyed. By that process I think we have the nearest approach to the ideal flour that has yet been made. There are a great many ways of preparing flour, but none of the others are anything like that.

Vice-President Bunting takes the chair.

A motion to pass the paper was carried.

DR. J. W. SCARBOROUGH reads a paper on a New Anæsthetic, and makes the following additional remarks:*

Dr. Mayo's business has grown very much on account of his using this new anæsthetic; he is almost worn out by his business and answering the inquiries of those who come to his office. I took the anæsthetic myself. It has the effect of producing unconsciousness, but the sensations are somewhat pleasing.

DR. BRADFORD—Is it sweet?

DR. SCARBOROUGH—No; I could not describe it. It takes no longer for a patient to recover from its effects than in the case of nitrous-oxide, but a little longer to become under its influence. I became unconscious in two and a half minutes, they told me.

DR. LUCKY—Is there any proof that it is not nitrous-oxide?

DR. SCARBOROUGH—The starting-point is just the same as with nitrous-oxide gas, which is made from nitrate of ammonia. I noticed the ordinary chemicals to pass it through. There is a combination of nervines that produces this wonderfully exhilarating and calming effect upon the nerves. That is their secret. I did manage to worm out one of the elements in that combination, on promising that I would keep it to myself until such time as they are willing to impart it to the profession. It is an innocent agent, and an excellent nervine. This anæsthetic seems to me like an entirely new one.

DR. WATKINS—The doctor says the Boston dentists seem to know

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* This paper was not presented to the Society by Dr. Scarborough, being mainly a few notes made while on a visit to Boston, Mass.

but little about it. I think I can perhaps account for that in the fact that the Boston dentists really take very little stock in Dr. Mayo. He does not stand very high in the estimation of Boston dentists generally. I do not wish to reflect upon Dr. Scarborough's paper or his impressions at all, but I must say that this Dr. Mayo is a man who is, I think, generally running into hobbies and getting up something greater than anything else; it adds to his business. A few years ago he was making a gold-foil that was better than anybody else's gold-foil; it was thirty carats fine; and there are several things that he has been into in the same way. He is an old practitioner, has been in practice thirty or thirty-five years.

Dr. MEEKER—I read in one of the technical journals lately of a new patent etherized gas, The process of the inventor is to pass nitrous-oxide gas through a fabric saturated with sulphuric ether, and then liquefy it by pressure in the usual cylinder. I did not notice the name of the patentee. From Dr. Scarborough's account of this new anæsthetic, I think it must be nothing but nitrous-oxide gas combined with ether or some other agent.

Dr. ODELL—I dislike to see so much prominence given to so gaseous a subject, and this later gas is, I think, all gas except the thing through which it is passed, which is perhaps a little cologne, perhaps something quite as efficacious. I imagine that we will have lots of these new gases just so long as we allow ourselves to produce anæsthesia. I cannot see any practical necessity for dentists giving so much prominence to such a subject. One question was started about the legal and moral responsibility of a practitioner when he uses these things. Gentlemen, there is no necessity for taking any responsibility. Why do you rush in and take this responsibility, when the people you serve, if they could only see that you were earnest and honest in your objections to its administration, would rather you would not take it? The first question a patient asks, as he comes in with the toothache, is, "Do you give gas?" If you are perfectly willing to extract a dollar from the patient's pocket and the tooth under an anæsthetic, as you usually are, you say "Yes." But I thank God that I am through with that, and have been for some years past. I manufactured the first nitrous-oxide gas that was administered for dental purposes in the city of Brooklyn, and before Colton came to New York. He was experimenting in New Haven, and my old preceptor, then a man of no great prominence, but still wide awake, had a relative in New Haven, Dr. Elias Strong, who also was somewhat wide awake. He wrote a letter to Dr. Porter, saying, "For God's sake come to New Haven." I thought some one was in trouble, going to die or something. Well, he came back with the report that he had seen a wonderful thing, and he said to me, "You know something about chemistry, do you think you could make me some laughing gas?" I said, "Yes, but I have no apparatus." He said, "Here is my pocket-book, get what you want, and make me some laughing gas." I did, and he inhaled the first dose. I passed it through water, with the idea that perhaps it would be better flavored than otherwise, and it was. We made some without passing it through anything but plain salt water, and he did not

like that either. You know the sensation after inhalation of the gas made in that manner is very much like what might be supposed to be produced by a rasp, in its effects upon the membrane of the air passages. Afterward I provided a ten-gallon keg filled with a solution of sal-soda; the next step being to pass the gas through a Wolf's bottle containing a solution of caustic potash. We administered the gas for a while at one dollar a tooth—at that time we used to charge fifty cents for extracting; afterward we raised it to two dollars. The only question was, does the patient want to pay two dollars or one? That was the whole of my religion at that time—could I get two dollars or one. If I could get two, I was willing to give them gas. I administered the gas when I first opened an office for myself, and I thought it was a great thing. There were lots of other dentists, old in the profession, who about that time thought it was a great thing too, and were praising to the clouds the use of it. These people were inquiring about it, and criticising and catechising those who administered it, and I felt as though I was a sort of apostle in the right direction. But, in the natural course of events, I fell under the wing of a man by the name of Atkinson, and from some words dropped here and there, and the discussions between him and others, such as Dr. Franklin and Dr. Fitch, I began to have some doubts. I admired them all, and I didn't know which to fight. You can judge I was quite in embryo. I began to think about the gas business, and I came to the conclusion that, as near as I could understand it, nitrous-oxide was not ordinary air by a long shot, and that you might kill a patient with it, not by its being poison, but by suffocation. I then began to handle the gas with some caution.

One statement has been made here, that you could not give the gas for a long time. I have given it for a long time; so you can, you see. In one case I gave some gas and extracted a tooth, and I kept on giving gas until I had extracted thirty-two teeth from that one mouth, inside of, I should say, two and a half hours. The only thing that saved my patient, and me from committing a murder, was the fact that once in a while the patient would gasp, and I would stop giving the gas and give her a chance to get some breath. Consequently, I live to tell the tale, although under those circumstances I ought to have been hanged for my ignorance. I have come to the conclusion that you not only run the risk of killing your patients, but supposing you do not go so far as that and the patient lives, you produce upon their systems an effect from which they do not recover in a few minutes. I have had patients with whom I was very intimate, and who would not tell a lie for the sake of the sensation, who went, by my recommendation and that of my then partner, Dr. William H. Allen, and had the gas administered to them, both at the Cooper Union and at Hasbrouck's place, an offshoot from the former, and they have told us, and I think truly, that they have not ceased to suffer from the effects of those inhalations of the gas. The effect is upon the nervous system, and further than that no doubt. We can see or be conscious of things, without being fully prepared to give the whys and wherefores, but they are there; and I was so well satisfied of the deleterious effects of this

gas that it and I have long since parted company. It is now about twelve to fifteen years since I administered the gas in my office. Just before that I had a physician bring his patient into the office, and she, through his advice, I think, objected to the inhalation of the gas, for which I was prepared, and proposed to take ether or chloroform. He, being a physician, preferred chloroform. I had administered chloroform combined with sulphuric ether, and I thought that was a little safer, and so I modified his practice and had him put a little ether with his chloroform. He got the lady under the influence of it, and I was to do the extracting. He said, "Doctor, now we are ready." As I stepped up to commence the operation, I said, "Doctor, she don't breathe." "So she don't," he said, and he ripped open her dress and proceeded to induce respiration artificially. Meanwhile I was studying the patient's physiognomy, and I concluded that there must be some other reason that she did not breathe besides what appeared upon the surface. So I pulled the corner of her mouth down and saw that her tongue had fallen back, covering the glottis completely. I took a burnisher and pulled her tongue forward, and she commenced to breathe right away. That incident frightened me. I came mighty near, through the ignorance of an M. D. who was to take all the responsibility in the matter, having a patient die in my office. It was nearer than I ever came to it alone, and I said, the next physician who gets into my office to do anything of that sort will be wide awake and up early in the morning. I should feel worse to have a patient die that way than I would if *I* had killed the patient, for then I should be busy, but to stand by and see her murdered was something dreadful. It is all very well for a physician to say that he takes all the responsibility, but the fact remains that a certain amount of responsibility always rests upon the man who permits the administration of these things in his office, and either assists in, or in part is supposed to benefit by or participate in any profit which may be the result of their joint action. It is, to all intents and purposes, a limited partnership, and in all such connections all the parties thereto participate in the profits, and as a consequence, must share the losses as well.

But I have gotten through with gas. In Asbury Park, the other day, a little colored girl came in and asked, "Doctor, do you give gas?" "O yes." "Well, I will take gas." I said, "My friend, I will give you the sort I am giving you now; it is the safest, and your tooth, that I am satisfied to take out, will come out so easy that you will love me all the rest of your days." It was a comical idea to the girl, who was as black as the ace of spades; it struck her as better than gas. I talked to her about various things, and she got into the chair, and I explained to her why I was satisfied to take that tooth out; the crown was almost gone, the adjoining one was almost gone also, both being bicuspids, and the expense, even if there were any possibility of her attending to the treatment necessary to save them, was hardly warranted by the situation, when I considered that there was no antagonizing tooth. I said, "If you do just as I tell you, you will go away more rejoiced than if you took anything

but what I am going to give you; put your hands on the arms of the chair and hang on for dear life, and in a moment that thing will be out, and I will show you a small sac on the end of the root, and convince you that taking an anæsthetic may be all nonsense." "But you will do something to stop the pain?" "Yes; hold on tight." I took a little instrument like a hand burr, with half an inch of the point bent at an angle of 30° to 45°, and flattened and sharpened on both sides like a lancet blade, such a little instrument as you use to examine a tooth with for discovering cavities; instead of using a lancet to cut around the gum I pass that little instrument around just between the margin of the process and the neck of the tooth—I often extract the tooth entirely with that little instrument, then I take the forceps and pick it out. So, after passing that little instrument carefully around the tooth, I picked up the forceps and said, "Now hold on tight; open your mouth wide; hold still; there is your tooth." She was a delighted girl. She ran no risk, and she thinks that is a wonderful smart dentist who gave her a kind of gas that she was safely over in two seconds.

The amount of pain that we have the right to inflict upon a patient is the amount which is incident to the extraction of one tooth. In the name of heaven, then, have we, to avoid that amount of pain, the right to risk the life and injure the nervous system of a patient, and, to come down to what may be of less consequence, our own reputation, and what is of still less consequence in the eyes of the world, but in my opinion the greatest of them all, our ability, from a nervous point of view, to decently attend to our business.

It is not the business of dentists to worry themselves into fiddle-strings in anticipation of some possible consequences that may arise from something which, it seems to me, is entirely out of their sphere.

DR. WATKINS—The subject of gas don't seem to run out. We have heard some good and truthful things from Dr. Odell, and in this connection I think it would be well to ask Dr. Bonwill to give us his experience with his method of air-breathing in the extraction of teeth.

ACTING PRESIDENT BUNTING—We would like to hear from our worthy patriarch, Dr. Atkinson. I remember hearing him say, some years ago, when discussing this subject, something like this: If you cannot control the patient in these operations yourself, for God's sake don't call upon *Old Satan* to do it for you! We shall be glad to hear from Dr. Bonwill.

DR. BONWILL—I came here not to talk of my own doings, but to listen to the experience of the members and their guests whom it is expected I should entertain. Nevertheless, I am always ready and willing to try to enlighten any one upon any of the subjects with which my name is especially connected. It is somewhat excusable in you to ask me, although my first article on this subject was published in 1875, in Welchen's *State Journal*, at Lancaster, Pennsylvania; also, in the *Scientific American Supplement*, No. 275, April 9, 1881. Its fullest history, as read before the County Medical Society, of Philadelphia, May 12, 1880; also, a brief extract from the same

paper was published in the *Medical Times* in Philadelphia, about July, 1880; as well as the many criticisms published in this country and in Europe. It would seem that if I had made myself clear upon so simple a practice, there would be no need that I should go into the details at this time. But I know you are not practicing this method, or you would not be wrangling about the other anæsthetics. I have often been asked to demonstrate this plan, but I have refused, because after I have done it the world at large have no more right to believe them than myself. I cannot go to every Society, nor show every individual disbeliever. The directions are so plain, the method so in keeping with true physiological laws, that with my standing as a dentist it would be presuming upon them too much to attempt a demonstration. Those who would not believe I have asked to furnish me with one of their own patients at my office.

While but few dentists have tested the merits of this method, many surgeons throughout the world have done so, and have proved that it is not a myth. The wide circulation given my article of May 12, 1880, has since been rewarded by many tests, but not by dentists, be it said to their discredit. Its history and progress have been that of other discoveries, slow but sure. When such a physiologist as Professor Brown-Sequard, of Paris, endorses me, I am quite content to let you see the light slowly. That gentleman told me, when I was in Europe in 1881, that it was not only a new discovery but a fact of great moment, well established by law, and incontrovertible. While he did not agree with my theory as to the causes, yet he had proved it as a fact before his class in many instances. I do not wish to be harsh upon my profession, yet I think they would show to the world the evidence of better sense if they would read, digest and apply what has been given them freely by others, instead of first ridiculing all new ideas. Had you read up upon this subject you would not need my further aid. However, I can assure you that I never grow tired of trying to convince, or I should have fallen by the wayside years ago in the introduction of my inventions.

You would like to know, then, whether I still use this method, and with what success. My motto is, The Salvation of Human Teeth; yet I do extract by the retail. In a few cases I fail to extract the teeth without pain, simply from the patient's want of *capacity* to breathe *rapidly* and *forcibly*. Whenever I can have the patient follow the directions of inhaling from forty-five to sixty seconds, I am sure of success; so much so that I have not used in my office since 1875 any other anæsthetic. Why should I, when *Nature's Anæsthetic* is always at hand, and without danger, but rather an advantage to health.

It has been supposed and asserted that I produced this effect by personal magnetism. If I do I am not aware of what it is. I do know, however, that the phenomena present in each case tell me a change has taken place in the patient that is perfectly explainable on physiological laws, and the appearance of the individual in every way attests it, and proof can be instituted upon them to prove the

problem. I shall not go into the explanations of how or by what means the change takes place, as I am preparing another article giving the results of inhaling condensed air through a tube, and its latest developments. I will, however, say that it is my belief that the active agent is carbonic acid gas, produced by an excess of oxygen through breathing four to five times as rapidly as is normal. The carbonic acid set free from the tissues cannot escape from the lungs, because the heart's action is not accelerated by the rapid voluntary lung action more than a tenth, and through which it must pass before it can have egress through the lungs. Fully two (2) per cent. of the gas is certainly in excess in the general circulation, and particularly in the brain, and its effects upon the human economy are well known; there can be no mistake that it is the active agent. *If the heart could pulsate in harmony, as in the involuntary respiration in normal breathing*—four to one—no such change could be effected, as the gas would escape as fast as formed by the union of the oxygen with the carbonic acid, which the former meets in the circulation at every point, and which is the only means by which the latter can be eliminated. When this element is thus in excess, any one can understand that obtunding must occur.

I can readily understand why it is that some of those who have made a trial of this have failed. It is this: many have told me they have tried it and *could feel when pinched by themselves.* This is no test at all. The real failure is in not teaching the patient that while he will feel the sensation of touch, he will not be cognizant of pain. They will understand partially what is going on around them. The operator must urge on the patient every moment, and not allow him to intermit, and must force him to breathe while the operation is being performed, or as much so as possible, as the carbonic acid gas escapes very rapidly when respiration ceases. Urge up the patient, and in about forty-five to sixty seconds he is ready for the operation. It would be impracticable to breathe much longer at that rapid rate. It will be at least five minutes before normal respiration will be again restored, showing that the system has been over oxygenated. While it may often appear to the operator quite a task to do this, yet when it is once done it will be found that the majority will submit. After the operation I have had patients tell me they felt pain, but I have soon convinced them to the contrary, simply by pressing together the lacerated gums with the thumb and index finger. "That is pain," they say, "the other was merely a sense of touch." Any one who has a desire to flee from the uncertainty of the after-effects of an anæsthetic, should make more than one trial with rapid breathing, relying upon my word that the majority of teeth that cannot be saved, or that should be extracted, can be extracted by this method; and with those cases not so thoroughly under control, the effect is such that the patient would not afterward run the risk of anything else. The danger from such a method, as stated in a late text-book, has not the least foundation in theory or in fact. It is a purely physiological action and result, and the only thing that could cause alarm is the mechanical respiration for a few moments immediately after the operation, but in the majority of cases respira-

tion is almost entirely suspended for from two to five minutes. The patient can sit up, or take any position while breathing, although I prefer a sitting or a half recumbent one. To prevent irritation of the glottis, it is well to throw a napkin over and near the mouth; and it is well to have the eyes closed, or let the napkin cover them. I tell the patients to breathe as if it was to be their last, and life depended upon their vigorous effort. The operator will have to stimulate them by doing it himself for a moment, and then talk sharply to them, telling them to "go on." It cannot be effected without the most positive exertion to get the greatest amount of oxygen into the system in the shortest time, and before the heart can possibly be accelerated. Rapidly doing it retards the heart's action, the gas accumulates,and has immediate effect upon it, as well as upon the nerve centres. Doing it leisurely will induce no other effect than a mere dizziness. Lastly, the operator must have everything in readiness, and lose not a moment in performing the operation. No slothful man should ever attempt it, for it will be a failure, or not a full success.

Should any one conclude to make a trial of it, I would thank him for informing me of the result, whether favorable or otherwise, and should like him to give the peculiarities in each case. Do not lose sight of the fact that the patient will not breathe rapidly and continuously without being all the time urged, and shown by the operator; but when once they are under way the former will mechanically obey your commands to "go on." These points gained, and success must follow.

Adjourned until ten o'clock to-morrow morning.

## THIRD DAY'S SESSION.

ASBURY PARK, July 20, 1883.

President Palmer in the chair. The Secretary called the roll.

Applications for membership were received from Dr. William Mitchell, of Bergen Point—endorsed by Dr. E. H. Bunting and Dr. George C. Brown; and Dr. Dr. L. D. Dobbins, of Camden—endorsed by Dr. James G. Palmer and Dr. C. A. Meeker.

The applications were referred to the Board of Examiners.

THE PRESIDENT—If there is no objection we will pass reports of committees and take up the reading and consideration of papers. Are there any gentlemen who have papers they desire to bring before the Association. Has any one the paper of Dr. Robinson?

THE SECRETARY—He has not left it with me.

THE PRESIDENT—We will, then, pass the consideration of that. It is customary to formally install the officers-elect, and, if there is no objection, the installation of officers will new be proceeded with. I will appoint as a committee to present the gentlemen, Dr. Clarke and Dr. Watkins.

DR. E. H. BUNTING, President-elect, on being presented and introduced, said—*Mr. President and Gentlemen:* Before assuming

the duties of the chair to which you have elected me, I wish to extend to every member of this house my hearty thanks for this expression of your confidence in me. To be elected to the Presidency of this Society is certainly an honor which any gentleman might well be proud of. I trust that your confidence will not have been misplaced in me, and I ask the co-operation and support of every member in the performance of the duties of the office to which you have elected me. For my part, I will do all in my power to advance the interests of this Society and of the profession generally, hoping to have your kind indulgence and that I may be able to merit your esteem.

DR. J. W. SCARBOROUGH, Vice-President-elect, on being presented, said—*Gentlemen:* I desire to express my sincere thanks for this mark of your confidence, and to pledge myself to perform the duties of the office, to which you have elected me as best I can.

DR. PALMER—I desire to make a motion, before the expiration of the session, that the Executive Committee be allowed to report. The new committee cannot report for the old.

Dr. Palmer's motion was carried.

DR. G. CARLETON BROWN read the following report of the Executive Committee:

The Executive Committee would report that they have secured the ball-room of the Coleman House for the meetings and clinics of the Association during its session, and that the programme will be carried out as printed, with the exception of Dr. Robinson's lecture, which he will not be able to give on account of not being able to get the instrument to illustrate it with.

G. CARLETON BROWN, *Chairman.*

On motion of DR. PALMER, the report of the Executive Committee was received.

The installation of officers was then proceeded with and concluded.

DR. BARLOW—I have a resolution to offer, based on information I have received from good authority; and I am sorry the gentleman to whom this matter points is not present, but at this late hour of the session it cannot be deferred. The resolution is this:

*Resolved,* That the action of a member in causing to be printed in a journal his essay, written for and officially announced as a portion of the Society's programme, is highly censurable and in direct violation of our By-Laws, which say that such papers shall be the property of this Association.

At the request of DR. CLARKE, the resolution was again read by the Secretary.

A motion was made to refer the resolution to the Executive Committee with power.

DR. CLARKE—That matter, I understand, is simply a resolution; it does not charge any particular person, but says, "a member." If they have a direct charge it will be proper to refer it to the

Executive Committee, but as it is, I think the only thing you have to do is to adopt or defeat that resolution. There is no particular charge there against any individual member of the Society; therefore, I do not see what there is for the Executive Committee to do.

DR. PALMER read Article VIII of the By-Laws, and said: I understand that the gentleman alluded to sent his paper to the journal while it was still his property, and that it does not become the property of this Society until it has been read. On that ground he did right.

DR. CLARKE—Then, if that is the case, it is not an original paper for this Society. I do not know who it refers to, but I think a reference of the matter to the Executive Committee is not in order. If a direct charge was preferred, then it would be proper to refer it to the Executive Committee, the same as in the case of Dr McKirgan. But this is simply a general resolution, which you can adopt or not as you see fit. Personally, I do not like this idea of printing papers in advance of their reading. We had a case some time ago of a paper printed as having been read before this Society, and it had not been read yet. I think the resolution as it stands had better be adopted by the Society, and then a direct charge made.

DR. WATKINS—As I understand the Constitution, the paper is not the property of the Society until it is read. Dr. Clarke claims that it was not original because it had been sent to the publishers. As I understand it, the paper was original if the gentleman wrote it with his own brain; furthermore, the paper has never been published, and will not be published for three or four weeks yet, not until the August number of the journal is printed. Dr. —— told me himself that he wrote the paper, and that he considered it his own property, and a paper that ought to be published freely, and so he sent it to a journal for that purpose. He did not know but it would be a year before it would be published with the proceedings of the Society, therefore he sent it for publication in the August number of the journal. Then it was his property.

THE PRESIDENT—Do you vouch for that, that he sent it to this journal before he read it here?

DR. WATKINS—He told me that he sent it there; that is all I know about it.

DR. PALMER—This resolution does not mention any one; it simply says "a member" doing so is censurable. I think it is unfortunate that his name has been mentioned in the debate, and I would like to ask that the record of the Secretary and the stenographer be corrected in that respect, so that his name shall not appear.

The motion to expunge from the record the name of the gentleman indirectly referred to in the resolution was carried.

DR. CLARKE—As far as the paper being original, I do not deny that it was original, in the sense that he wrote it, but I do not think that a member of this Society ought to make such haste to rush into print as soon as he has read his paper, or before. Why can't he wait until September? I do not think it is anything to his credit to put it in the hands of the printer so that it can appear a month earlier. It is not showing proper respect to the members of this Association.

The papers read before this Society are supposed to be original and to be devoted to the purposes for which they were written—for the benefit of this Association and to be the property of this Association. The gentleman was announced to furnish such an essay, the Society expected it to become their property, and did not think he would rush into print with it.

DR. SCARBOROUGH—I think the adoption of this resolution would answer every purpose. It will express the Society's condemnation of this kind of thing, without taking any special action in this case. Therefore I move the adoption of the resolution.

DR. CLARKE—My motion was that it be referred to the Executive Committee with power. That committee has power to try those charges, and what they do this Society is bound to stand by.

The resolution was adopted.

DR. PALMER—I would desire to hear the report of the Committee on the Death of Dr. Webb.

DR. MEEKER—The chairman of the committee is absent, and I have not had time to consult with the other members of the committee.

PRESIDENT BUNTING—We will extend the time for a few minutes.

DR. PALMER—I would suggest that they be directed to act as they please in regard to publishing what resolutions they may offer, and make their final report afterward.

The motion that the Committee on Resolutions of Respect to the Memory of Dr. Marshall H. Webb be authorized to publish their report in the journals, and make their report to the Society at a future meeting, was carried.

DR. CLARKE—I understand that yesterday afternoon the subject of the report of the Committee on the Dental Law was brought before the Society, and that a motion was made to lay that subject on the table. Not being present then, of course I could not take any active part; if I had been, I would have stated my views. I now move that the motion that was made to discharge the Committee on the Dental Law be taken from the table.

Dr. Clarke's motion to take Dr. Osmun's motion from the table was carried.

DR. CLARKE—Dr. Osmun's motion is now before the Society, and I rise to a point of order, and I ask the ruling of the chair upon it. My point is, that the motion of Dr. Osmun was out of order; the committee could not be discharged until they had made their report.

THE PRESIDENT—That was my ruling yesterday. I look upon it the same as Dr. Clarke does. The committee had been called upon for a report; the committee did report progress; and Dr. Osmun immediately rose and offered a resolution that the report of the committee be accepted. It was accepted. Until that committee had been called upon for a subsequent report, no resolution to discharge that committee would be in order—before that committee was called upon to make a report. Consequently I rule it entirely out of order. If any one wishes to appeal he can do so.

DR. CLARKE—There is no chance for an appeal; there is nothing to appeal from.

THE SECRETARY stated that the Examining Board had reported favorably upon the applications for membership of William Mitchell and L. D. Dobbins, of Bergen Point and Camden, respectively.

DR. CLARKE—That should be Bayonne; Bergen Point is simply one of the wards of Bayonne.

On motion, the Secretary was authorized to cast the ballot for the candidates named, and they were declared duly elected to membership.

THE PRESIDENT appointed to the Advertising Committee, for printing the transactions, Dr. F. A. Levy, Dr. G. Carleton Brown, and Dr. James G. Palmer.

DR. WATKINS—The matter of advertising has been discussed here somewhat this morning, and I would like to get the sense of the members present in regard to advertising—what rights the members of this Society have to advertise and how far their rights may go; especially with reference to show-cases put out in front of their offices, with many sets of teeth in them, and filled teeth, boxes of tooth-powder, and so on. And the making of a grand exhibition in the way of cards in the newspapers, and all that.

THE PRESIDENT—I cannot do better than refer you to Section 3 of Article II of the Code of Ethics.

DR. CLARKE—They have no right to do those things; it is against the Constitution, if we are now living up to the strict letter of it.

DR. WATKINS—Then the only advertisement that a dentist can rightfully have is a card in a paper, with his name, address and office hours, and a card in his office to give to his patients.

DR. CLARKE read Section 3 of Article II of the Code of Ethics.

THE PRESIDENT—I will declare a recess of fifteen minutes, to give Dr. Scarborough and Dr. Bonwill opportunity to present their cases.

DR. BONWILL—I have here the plaster-casts of a most remarkable case of non-development of the incisors and cuspids of both the superior and inferior jaws. The bicuspids also show imperfections, but not to the same extent. The first molars on the left and right superior, and in the right inferior, had been removed several years ago. The remaining first molar in the left inferior jaw was rudimentary in crown, but not decayed. There were no pulps exposed. The second molars were badly decayed in the fissures only, and the bicuspids also, but not to any depth. The incisors and cuspids of both jaws, although having no enamel on three-fourths of their surfaces, show no signs of decay. The young miss is sixteen years old; and the case is more remarkable from the fact that the temporary incisors and cuspids of both jaws were of the same character as the permanent set just described, both sets emerging from the gums in this condition. An older sister by two years had a beautiful set of teeth in appearance, but scarcely a proximal or grinding surface was free from rapid decay, and there were at least five pulps exposed. The case came into my hands late in the season, and its history I am not able to give you now. I hope to be able to do so in the future. Aside from the primary causes, the great points of interest to us are, why have not the teeth having no enamel upon their sur-

faces not decayed as fast as erupted, while those of later growth with surfaces thickly covered with enamel, but with deep, rough fissures, are all involved? And if such be the fact, why is it that the cutting with a disk, file or diamond reamer, of a portion only of the enamel, in subjects of a like age whose teeth show signs of early decay, will not present such a surface that decay will not be the result, any more than in the case of non-development of enamel? The other point is: How can the great deformity—which it is—be most artistically and practically transformed or remedied? Shall it be by the wholesale extraction of the roots of all; or shall they be retained and crowns of some kind substituted upon a part or the whole; or shall a gold plate be placed upon the roots, or partially developed crowns, and teeth soldered thereto? There is at the incisors a space between each jaw of an eighth of an inch; and in the restoration perhaps the teeth of both jaws will have to be individually treated, or be brought into union with the whole. The articulation will have to be radical to produce any natural effect or to make the operation of any value. I shall report this case in full as soon as I have perfected my designs and completed the operation.

DR. HAYHURST—What is the age of the person?

DR. BONWILL—Sixteen years.

DR. HAYHURST—I suppose you must all be aware that there are no cases that come under the hands of an operating dentist that are more difficult than those of non-development, to find out the causes of it and determine what is best to be done. As Dr. Bonwill has truly said, the extraction of those teeth may prevent the proper development of the jaw, and an old face and an old jaw will be exhibited in a young person, and that comes as near making an old head on young shoulders as anything I know of. If it is possible to retain those teeth until the full development of the jaw takes place, I think it should be done; but whether it can be done, and, if so, what means should be taken to accomplish it, I am unable to say. I should suppose that, unless the teeth are of a spongy, calcareous structure, and liable to crumble and break away, they would gradually become smooth and without any protuberances at all; and if artificial teeth can be inserted for a short time, my opinion is that it ought to be done, and these teeth retained at least until the jaw is fully developed. It is a curious case, and every person here may have a different opinion regarding it. It has been the rule that everything that could not be made perfect must be dragged out and thrown away, but in a case like this I think it would be a sin to extract the teeth.

DR. WATKINS—In what way would you restore them?

DR. HAYHURST—No restoration is necessary; the teeth are there now. I say that if the mouth can be regulated with a temporary structure in order to let the teeth stay there for a few years until the jaw shall be fully developed, it had better be done.

DR. L. A. READING—I had a case, about two weeks ago, that presented just such an appearance in the upper jaw, but not in the lower jaw. It was the case of a little colored girl only twelve years old, with full lips, pug nose, large features, and black as the ace of

spades. I took an impression of the mouth to study over, intending to take it down to the college for advice. That is the reason I am so glad to have an opportunity to look at this mould and refer to the case. I took the mould to Trenton and gave it to my father; I told him that was an elegant chance to try Richmond or Bonwill, to devitalize all these pulps and put on the choice of crowns. But, as it was a case for "sweet charity's sake," and not for fee or favor, I decided to save myself, and therefore etherized and extracted the teeth. It was just such a mouth as this, except that the non-development was only in the upper jaw. The teeth in the lower jaw were very much atrophied, but were fully developed. They were not decayed. I should like to hear the result of Dr. Bonwill's case.

Dr. Odell was nominated and elected a delegate to the New York State Dental Society.

On motion of Dr. G. CARLETON BROWN, the Secretary was authorized to appoint delegates to the different Dental Associations and issue certificates to them.

DR. CLARKE offered the following resolution, which was passed:

*Resolved,* That a vote of thanks be extended to our retiring President for the able and impartial manner in which he has presided over this Association for the last year.

DR. SCARBOROUGH—*Mr. President:* I have here a curious specimen of a morbid growth. I was called upon to extract a *dens sapientia,* the six and twelve year molars being gone. I found that the process was all absorbed and the tooth was just tottering in the gums. As I was about to grasp the tooth I found a small protuberance upon the posterior side, and on shaking the tooth the whole thing shook. I pulled it out without any effort scarcely. Here is the tooth, and here is the growth; whether a morbid growth, or the result of a tooth germ I am unable to say. I find that under the microscope both parts present the appearance of enamel. The large part is posterior to the *dens sapientia.*

DR. ODEL—In relation to the case presented by Dr. Bonwill, I would say that if the teeth are of sufficiently good structure to warrant the supposition that decay would not very soon set in and break them down, I should think it would be an excellent case for the Buttner operation with the little gold cap. The teeth are nearly round in outline, there would be little or no protuberance outside the gold cap, none but what could be nicely beveled off; when highly polished, they would stand a good chance of being cleaned readily, and there would be no destruction of pulp. Buttner's apparatus simply cuts the outer ring away, leaving a shoulder, and the crown is held only by its fitting so accurately the neck of the tooth. In case the teeth were of very poor structure, and would not warrant such an operation, which is somewhat expensive, there is another method. Imagine, in the first place, that the crowns are only above the gum, scarcely through; imagine then that we have no teeth there at all. Make your model, and make a plate from

that model to overlie these crowns; not to cover the whole of the teeth, but have a sort of continuous bar, with a light flange on each side sufficient to hold it, and I think it could be arranged so as to give a fine articulation and be readily removed for the purpose of cleaning. The idea of doing anything in a mouth of that kind with the hope of having it better developed, I think would be preposterous. The case is too far along. The only thing is to make the best of what we have now. If I could make such a bar as I speak of, with such a narrow flange that it could be taken out readily and slipped in freely, like a trombone works, the patient could keep all clean. The plate, the teeth and the gums, and that, it seems to me would be the best thing.

DR. BONWILL—At this time I shall offer no extended objections to Dr. Buttner's method of crowning roots, further than relates to the special case before us now, that of a root with pulp not exposed. The nature of this method lies in the absolute joint between the dentine and the metallic cap, and the absence of any central pin, as where the pulp has been removed. Were the dentine to undergo no changes, and the metal none, then there would be some chance of permanence. But when you reflect that the dentine does very materially condense, and that the gold band must fluctuate between the radical cold and heat so often applied to the parts, we can scarcely hope for success in the crowning without a central pin. Unless each trephine is kept in mathematical order on its inner surface, and each gold cap furnished fits the dowell made by the trephine, there is nothing short of a cement between them that can make it secure; and such application cannot easily be practiced, since there would be so nearly an absolute union of the parts that there would be no room for the medium. Besides that, the average practitioner is so unused to such fine manipulation that, notwithstanding the tools are beautifully adapted to such operations, no exact fit would be made. Another very serious objection to the plan is that, should the crown not be driven home exactly as desired, there is no way of altering it but by cutting off the whole operation and commencing anew. If it could be easily changed in position it would have no value.

DR. ODELL—That is very true, but I take it that as all teeth should not be filled with gold nor with amalgam, but with judgment, so all operations in the mouth should be performed in like manner, with judgment. I have very little faith in the agreement of any two so widely dissimilar things as a metal cap and the dentine of a tooth for making a perfect joint, but you can compensate for this dissimilarity with some other things, introduced to prevent leakage. In putting on his crown, Dr. Buttner depends, as I understand, solely upon the perfect fitting of the crown or cap to the root; but in that case he must have the highest development of dentine, in order to get a reasonable measure of success in the future. In the case here exhibited by Dr. Bonwill, where we have imperfect development, he could not expect so great a success. Therefore, in using this Buttner apparatus for this kind of a tooth, I should prefer to first fit it on so as to secure the proper adjustment and articulation, and

then have the metal ring hot when driven to its place, having first introduced a film of gutta-percha. I do not rely, in such cases, on oxy-chloride or oxy-phosphate; I think they cannot be depended upon; wherever they come to the surface in the way of a filling, they are apt to disintegrate and wash away, and I am equally fearful of the phosphates when put between a metallic substance and the tooth-substance. On the surface we know it will wear away; on the same ground I believe it will do the same at the edge of a cap. We know that gutta-percha, under a pressure like that at the bottom of the sea, becomes as hard as a rock; and gutta-percha, to the best of my knowledge, if decently adapted to the case, is the best filling we know of. I tell my patients it is a temporary filling, and when they ask how long it will last, I say that depends on the amount of attrition—from a week to eight or ten years. "And is that what you call a temporary filling?" Undoubtedly. I call gold a temporary filling sometimes. Gutta-percha I have known to last, in my wife's mouth, for eight years. It was a case where protection from pain and long operations in the dental chair became a consideration. I use gutta-percha by taking small pieces, and, on getting it hot, putting it upon the place, and seeing that it cools before adding more. When I see that it begins to cool, I add other small pieces, pressing home with a cold burnisher. I finish the surface with chloroform and tape, or a little cotton wound around the flattened end of a stick or the flat end of a file, wet with chloroform, and wipe over the surface of the filling from the centre to the margin. Especially in proximate surfaces, I wash over with a solution of gutta-percha and chloroform.

DR. WATKINS—Do you use carbolic acid?

DR. ODELL—Well, I use creosote almost invariably. I prefer the old stinking wood creosote to carbolic acid, on account of its obtunding quality, of which I think it possesses more than carbolic acid does. I frequently take a piece of paper and roll it up into a delicate funnel, and burn it, and as the smoke rises from the small end I catch it on a piece of metal; then I wipe my cotton on that. Sometimes the cotton will be stained, sometimes hardly so. But it is very much more efficacious than the creosote that we get bottled up. After saturating my cavity for five minutes with creosote, I stop it up pretty tight. I then wash the cavity with something to dry it. What will that be? In some cases I use a variety of preparations, but in most cases I use chloroform, and for two reasons: First, in order to leave a perfectly dry surface, and secondly, if there is anything not dry in there, if such a thing is possible—and I always like to hedge around and allow for all the possibilities—the chloroform remaining dissolves the surface of the gutta-percha coming in contact with it, and I have as absolute contact with the dentinal wall as you can get with a substance that has moisture within it or touching it.

DR. MEEKER—I would like to say to the gentlemen present that we have, in the northern part of the State a large and growing local society that meets monthly; we have a paper read every month, and generally an exhibition of something in the way of dental appliances,

and we would be pleased to see you at the meetings. We meet at different places, and communication is easy from all parts of the northern section of the State.

DR. WATKINS—I would like to say that the next meeting of that Association will take place at Montclair, on the 27th of September, at my office, and I would like to extend an invitation to the gentlemen present who are not members of that Association, to attend the next meeting.

DR. HOLBROOK—I move that we reconsider the selection of the next meeting-place of this Society. There are some members who prefer having a change from year to year.

The motion was seconded.

DR. WATKINS—So far as I am concerned I feel well satisfied with Asbury Park, and I do not think it would be well to reconsider our action in the matter now, because a great many are not here now that were here when the vote was taken on this question. I think it would be wiser to leave it in the hands of the Executive Committee, giving them power to make a change if they see that it will be an advantage to the Society. If they cannot secure proper accommodations in Asbury Park, and are able to secure better accommodations at Long Branch, I should be in favor of a change, but I do not think it would be policy to change the place of meeting to Long Branch now.

DR. PALMER—Our Constitution provides that we shall select the place of meeting, and it cannot be left to the Executive Committee. Personally I think we have had a very good meeting here. I think it would do no harm to the Society to meet at Asbury Park once more. There are other places that may be as good; Cape May is my favorite place, but I shall vote against the reconsideration of the motion.

DR. GEO. C. BROWN—I am afraid this would be a bad precedent to establish. I think it has been our custom usually to decide on the second day of the meeting where our next place of meeting shall be, and that is the day when we have the largest attendance; we decided it yesterday, and I think that for this meeting to-day to change that decision would be a bad precedent to establish. If we are not satisfied next year, then we can go to some other place. All things considered we have had as good a meeting here as we have had anywhere in a number of years; we have certainly had a larger attendance. Some things may not have been pleasant, but, all things considered, the meeting has been a grand success.

DR. ODELL—It is not my business, but perhaps my experience may help you a little. When the American Association held their meeting at Boston, they did the wisest thing they ever did in this direction; they went away out of town to a place upon a hill where there was a lovely place for a meeting, no bowling alleys and no row outside or inside; we could hear every speaker without straining our attention, and nobody went to sleep. Asbury Park don't mean the Coleman House. There are plenty of places here, large places, where you can get a good hall and have quiet all around, and every accommodation so far as I can see, and I would suggest to the committee to look well before they leap.

DR. LEVY—What motion is before the house?

THE PRESIDENT—A motion to reconsider our action in selecting a place of meeting.

DR. LEVY—I am opposed to Asbury Park, decidedly. but I am not in favor of taking advantage of the absence of other members to spring a trap on them; therefore I shall vote against the motion to reconsider.

The motion to reconsider was withdrawn.

On motion of the Secretary, a vote of thanks was accorded to Mrs. Coleman, of the Coleman House, for the courtesies extended to the Association.

Adjourned *sine die* at 11.40 A. M.

CHAS A. MEEKER, *Secretary*.

## CLINICS.

DR. E. SLEGEL, of Reading, Pa., gave a clinic, inserting a new crown, of which the following is a synopsis:

### A CROWN FOR THE ANTERIOR ROOTS OF EITHER DENTURE.

To make the crown and fit it accurately, it is necessary to take an impression of the space between the teeth and the base of the root, and an articulation. When this is had, a plate-tooth of good color and mould should be ground, to fit upon the model; a backing should then be soldered to it, and nitched with a fine instrument; then bend and shape a thin band of gold, corresponding to the parallel surface of the adjoining teeth, at the same time forming the pin-hole. It is necessary that the pin-hole in the crown and the root-canal should be directly opposite each other. This being done, it should be carefully removed from the model, invested in sand and plaster, soldered again, finished up, and the crown is ready to be placed on the root. The nerve of the tooth, if alive, should be destroyed, and undergo the necessary treatment. The preparation of the root, previous to the attachment of the crown should be, first, to cut away the jagged remnant of tooth, if there be any. Then the exposed surface of the root should be ground smoothly down, with a corundum stone, to about half a line below the margin of the gum, giving it a slighty concave appearance, so as to accommodate the neck of the crown, which is to rest against it. All decomposed dentine should be removed, the canal enlarged, the inner walls roughed, to retain the filling material. The walls of the canal at the orifice of the root should be leveled outward with a sharp burr, so that the amalgam may lap entirely over the edge, and protect this part of the root from the action of the secretions of the mouth. At this stage of the operation, after having prepared the root as described, fit the crown to its place on the root, stop the hemorrhage, dry the canal thoroughly with spunk, then force a small pellet of gutta-percha to the apex, so that the mercury in the the amalgam is not forced through; press in amalgam to the base of the root, force

in the pin, made either of platinum or silver, jagged and pointed and bent to suit the position of the crown; pack the amalgam tightly around the pin. The crown may now be pressed tightly to position, and the amalgam packed around the remaining part of the pin, through the pin-hole. After it has become hard, gold, if desired, may be packed over the surface of the amalgam, which, when completed, has the appearance of a contour filling.

Dr. W. G. A. Bonwill, of Philadelphia, was present by invitation to exhibit his inventions—the dental engine, new hand-piece, the engine or mechanical mallet, and his porcelain tooth-crowns. Every year these articles, entire, or some portion of them, undergo radical changes for the better, and are recognized as among the standard articles in the profession. The new hand-piece is one of the most radical of changes; and it takes not only the standard bit, but the cone journal also; it has a combined chuck, biting at both ends of the bit, and holds any plain cone, of six different sizes of calibre of gauge plate. The chuck is operated from the heel, and not at the point, as was the case with his first instrument, and when locked holds the bit so that it cannot be drawn out with a pair of forceps. The nose need not be made smaller. Dr. Bonwill claims this hand-piece to be the most perfect mechanical production he has given us; and comparison with other instruments, and what he has heretofore done, shows that we can rely upon his assertions. It can be attached to any engine.

The engine has received marked changes, and has his engine-mallet attached on one cord, or belt, so that in a half minute the hand-piece may be removed and the mallet substituted, getting clear of the weight of the former, and without changing a screw. This mallet has quite superseded the electric mallet, he says, and is to be found to day in the hands of the most enthusiastic friends of the electric. Its simplicity, durability, ease of operation, perfection of blow, little liability to become disabled, and great rapidity, all assure us, with the experience of the past three years, that it should be, and no doubt is, all that Dr. Bonwill states. The recommendation of some of the best operators attest it. If it is all that is claimed for it, there will be not only an advance in the use of gold, but the too great and indiscriminate use of amalgam will be checked, since it gives to the average dentist a power for perfection of gold packing that is not possessed by any other instrument. We can but hope that Dr. Bonwill's predictions may be realized.

As to his tooth-crown, nearly or quite every man in our Society can give evidence that in it is exhibited one of the progressive steps of the last decade. They have gone everywhere, and their immense sale—nearly 4,000—is full evidence of their acceptation by the profession, and that this crown has "come to stay," notwithstanding the many crowns that have since been brought out to compete with it. The great drawback to the crowns has been the fact that the S. S. White Dental Manufacturing Company have never given us the crown as devised by Dr. Bonwill, nor are they made in such styles, shapes, sizes and quantities as the great demand for such a necessity justifies. The importance of such an invention cannot be

overestimated, and we should see to it that that company do make such as Dr. Bonwill has a right to insist shall be made. The strength can be very materially increased, and their adoption placed beyond a doubt. We are told that this old tooth for wooden pivots has almost gone out of use, which is certainly a result that was well worthy of Dr. Bonwill's efforts to give us such an adjunct. The growing demand for such an article should cause us to look into this matter and investigate all the plans being brought forth, in order that we may be assured among ourselves which is the best mode or modes, and state with emphasis in our proceedings what we honestly think is the best and so recommend. Our thanks should go out to those who are laboring in this and other fields for our good, and an invitation should each year be extended to any and all who are thus engaged in widening the field of our operations and endeavoring to give us additional means to glorify our profession.

Dr. Buttner, of New York, set for a lady patient a right superior central incisor, by his new method of crown setting. By this method, the nerve canal is enlarged, by means of peculiar instruments, to a certain required diameter, after which a trephine, guided accurately by an arm projecting into the prepared nerve canal, cuts a shoulder around the root of the tooth. Then a metal cap, corresponding in size with the trephine used, provided with a central pin and having the crown attached, is driven to its place with a mallet, making, it is claimed, a perfectly water-tight joint. After the root is prepared, the metal cap, pin and tooth-crown are made ready for setting or driving home, the mechanical work all being done outside of the mouth.

Dr. Charles M. Osler exhibited a case of irregularity, which Dr. Atkinson diagnosed as a transposed lateral, and advised its extraction. The patient was a boy of nine or ten years.

## CLINIC EXHIBITS.

Dr. C. A. Timmie, of Hoboken, N. J., demonstrated the use of Dr. R. Telschow's hydraulic press (designed to facilitate the stamping of metal plates), and a very small furnace for continuous gum work, which is heated by ordinary coal-gas. The several steps to be taken in the use of the hydraulic press are as follows: An impression of plaster of Paris or impression material is coated with a thin film of oil or a solution of soap; a suitable rim of thick paper or thin sheet iron is put around the impression cup, into which a compound of sulphur and plumbago and some other substances called Spence's metals is poured. (See August number *Independent Practitioner*, page 415.) The melting of this metal must be done very slowly and under constant stirring. It melts at a temperature of about 280° F., when it is quite thick, but after stirring it for a minute after it has been removed from the fire, it becomes a comparatively thin liquid, and this is the proper time to pour it into the impression. The cast is then freed from the impression material and imbedded in the upper (bell) portion of the hydraulic

press. If the alveolar ridge of the die is low and not overhanging, the metal plate can be pressed upon it without any other procedure; if, however, the alveolar ridge is high, or very much overhanging, one zinc die is necessary upon which the folds of the plate can be hammered out, as the Spence metal can bear any amount of pressure, but not the slightest tap with the hammer. A plate pressed by this press fits better than one stamped up in the old manner, and consequently requires no air chamber.

DR. WM. W. EVANS, of Washington, D. C., restored for Dr. E. P. Brown, of Flushing, L. I., the mesial and cutting edge of the left upper central incisor, with gold which was introduced by the electro-magnetic mallet. Dr. E. P. Brown, after the operation, called attention to the neighboring tooth, the lateral, which contained a large filling of heavy gold foil made by Dr. Wm. H. Atkinson in the year 1868. The edges of the enamel had retained their normal color, and the filling appeared to be perfect in every respect.

DR. WM. W. EVANS further exhibited a new apparatus for pressing or vulcanizing celluloid, zylonite or rubber, and some beautifully made sets of artificial teeth mounted upon celluloid and zylonite.

DR. RYNEER, of New York City, showed some samples of his new crown for molars and bicuspids.

DR. WM. H. DIBBLE, of Trenton, N. J., showed a lathe for grinding gum teeth, the new feature of this machine being a contrivance for holding the gum teeth in such a manner that a perfectly flat joint is invariably the result.

MR. GEO. E. HODGE exhibited his well-known excellent hand-piece for the dental engine.

The Wilmington Dental Manufacturing Company had a well-selected stock of their teeth on exhibition.

The Redman Manufacturing Company, of Newark, N. J., showed a number of useful appliances, such as brackets, lathe heads, etc., all of which were exceedingly good for the low price.

The Robinson Dental Manufacturing Company, of Jackson Mich., exhibited their fibrous metallic filling.

MR. L. D. CAULK, of Camden, Del., was also present to show his well-known varieties of filling materials.

DR. A. N. ROUSSEL, of Brooklyn, N. Y., showed his criterion gutta-percha cylinders.

DR. C. F. W. BODECKER, of New York City, regretted that he was unable to demonstrate microscopical specimens as announced, by means of the McIntosh stereopticon, as the apparatus, which was promised by Messrs. Tieman & Co., of New York, had not arrived.

DR. W. E. BURKE, representing the S. S. White Dental Manufacturing Company, exhibited a new dental operating chair, called the Cycloid, having some new motions, and being comparatively cheap. Dr. Burke also had on exhibition a new hand flask press, known as the Handy Flask Press; also, a cone clutch lathe-head which insures trueness to the mandrils or chucks, and the new electric motor which is designed to take the place of the dental engine.

## HIGHLY RECOMMENDED FOR DENTISTS' USE.

# ANTISEPTICS

## LISTERINE.

*The combination of medical agents, as presented by us, produces a remedy of peculiar antiseptic property, alike adapted to Surgery, Obstetrics, Gynecology, Laryngology, and all Zymotic or Febrile diseases, the best clinical testimony having established its safety* internally, *even in large doses, while its capability of dilution to varied strengths for local application demonstrates its power and scope.*

FORMULA.—Listerine is the *essential Antiseptic* constituent of Thyme, Eucalyptus, Baptisia, Gaultheria, and Mentha Avensis in combination. Each *fluid drachm* also contains *two* grains of *refined* and *purified* Benzo-boracic Acid.

DOSE.—One teaspoonful *three* or *more* times a day (as indicated). As a local application to ulcers, wounds and abscesses, or as a gargle, mouth-wash, inhalant or injection, it can be used *ad libitum*, diluted as desired.

*The therapeutic value of LISTERINE has been thoroughly established by the most conservative and scientific element of the profession.*

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By FRANK M. DEEMS, M.D., Ph. D., *Late of University of New York.*

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By PROF. DUDLEY S. REYNOLDS, M.D., *Louisville, Ky.*

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By HENRY O. MARCY, A.M., M.D., *Boston, Pres. Amer. Academy of Medicine.*

Also clinical notes from the following and many other well-known physicians:
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## Unsurpassed for Strength, Temper and Finish.

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For many years the Dental Instruments and Appliances of our manufacture have been steadily growing in reputation, the natural result of a faithful adherence to the use of the

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Including those of the great Expositions of Paris, London, New York, Chili, Philadelphia, and the Grand Diploma of Honor, at Vienna.

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The "1000 Fine Gold Foil" is exactly what its name indicates—absolutely pure. No alloy of any kind is added to produce the qualities which make this Foil so popular. These are peculiarly and distinctively its own, resulting solely from the special care to secure absolutely pure gold, and from the processes by which the Foil is made.

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# TEETH.

We are making more Teeth, and of a better quality, than ever before in the history of the house, and in a wonderful variety of forms. The recognition by the profession of their superior quality is such that, notwithstanding increased facilities, we have for some time past found it difficult to meet the demand.

We are continually adding moulds of new forms, making our already very large assortment still more complete, and giving us advantages unapproached elsewhere for suiting special and difficult cases. We have recently added many very useful patterns of Teeth for partial cases—centrals in pairs, a central and lateral (right or left) in pairs, two centrals and a lateral (right or left), and bicuspids in pairs.

Our assortment of Plain Teeth for Celluloid work is very fine.

Our stock of sizes and forms of the old style Pivot Teeth has been largely increased.

We would call special attention to our large and varied stock of Tooth-Crowns, which are coming into general use—Bonwill-Gates', Weston's, Foster's, How's, and others. We are prepared to meet the increasing demand for these crowns with a great variety of forms and shades.

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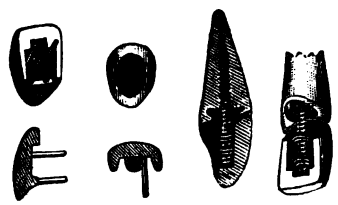
PORCELAIN TOOTH CROWNS.

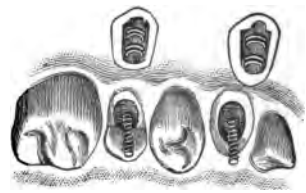
Manufactured under the combined patents of Dr. W. H. GATES, June 29, 1875, March 1, 1881, and Dr. W. G. A. BONWILL, March 1, 1881.

DR. WESTON'S Porcelain Tooth Crowns.

DR. HOW'S PATENT TOOTH CROWNS.

(Patented April 10, 1883.)





Porcelain Cavity Stoppers, which we have recently commenced to manufacture, have been found very useful, and they are having an extensive sale. Our large business was founded on the reputation of the Teeth manufactured by us, their superior qualities justly entitling them to the name of

# THE WORLD'S PREMIUM TEETH.

We propose to maintain this supremacy by constant study of this branch of our manufactures, and by improvement whenever possible.

We claim to have by far the largest stock of Teeth in the world, and the greatest variety of forms and shades.

We claim that, weight and bulk considered, our Teeth are the strongest made.

We claim that in truthfulness to nature, our Teeth, whether in daylight or in artificial light, surpass all others.

We claim, in shape, color, texture, translucency, strength, lightness, variety in anatomical peculiarities, and range of adaptability, a combination of excellences not attained by any other manufacture of Porcelain Teeth.

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## IMPORTANT REDUCTION IN PRICE.

It has long been our intention to offer to the profession not only the best but also the cheapest plastic base for artificial dentures in the market. Hitherto we have been obliged to defer lowering our prices, owing to, at first, the great cost consequent upon getting up complete sets of moulds and other machinery necessary to a rapid and thorough production, and then to the long and expensive litigation incurred in our determination to free the dentists from the claims of the Goodyear Dental Vulcanite Company. These causes being removed, we now beg to announce a large reduction in prices, amounting, on an average, to over FIFTY PER CENT., to take effect upon all plates purchased on and after April 1, 1883.

In the past we have always had but two prices, one for all "full" plates (uppers, lowers, and plumpers), and one for all "partial" plates. As we have been constantly adding to our stock new sizes, varying largely in weight, it is no longer fair to either the dentist or ourselves to adhere to that method, and thus charge more for a light plate, because it is an "upper," than for a heavy one which happens to be a "partial." We have therefore arranged an entirely new schedule of prices, as given below.

It has never been our practice to endeavor to force our goods by advertisements, or other means, as we have been content to allow them to speak for themselves, but after twelve years' steady and increasing sales, we feel that we can claim, with confidence, the best plastic base offered to the profession, free from all objections of color, taste, danger of mercurial poisoning, etc., incident to the rubber base.

Our plates are to be found at all dental depots. We do not receive orders at the factory. Sole agent for the United States,

**THE S. S. WHITE DENTAL MANUFACTURING CO.**

## PRICES.

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| **UPPERS,** | No. 3 | No. 3½ | No. 4 | No. 4½ | No. 5 | No. 5½ | No. 6 | No. 6½ |
| | 16c. | 20c. | 18c. | 22c. | 22c. | 25c. | 27c. | 29c. |
| **UPPERS, 'A,'** | No. 3 | No. 3½ | No. 4 | No. 4½ | No. 5 | No. 5½ | No. 6 | No. 6½ |
| | 23c. | 24c. | 24c. | 28c. | 30c. | 30c. | 39c. | 44c. |
| **LOWERS,** | No. 1½ | No. 2 | No. 2½ | No. 3 | No. 3½ | No. 4 | No. 4½ | |
| | 12c. | 13c. | 16c. | 15c. | 21c. | 21c. | 26c. | |
| **PLUMPERS,** | No. 3 | No. 4 | No. 5 | No. 6 | | | | |
| | 27c. | 36c. | 43c. | 35c. | | | | |
| **PARTIALS,** | No. 5 | No. 6 | No. 7 | No. 8 | No. 9 | No. 10 | | |
| | 8c. | 10c. | 13c. | 16c. | 14c. | 18c. | | |

We have prepared a chart, showing the exact size of each of our plates, with the prices marked upon them, which, together with a pamphlet of instructions in the use of our base, we will be pleased to mail to any address upon receipt of a request so to do.

**CELLULOID MANUFACTURING CO.,**

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# Gold Foil, Tin Foil and Amalgam

Are used and recommended by many of the best Operators throughout the country.

## FOR SALE BY DENTAL DEPOTS GENERALLY.

If you cannot obtain the above from your dealer in Dentists' Materials, remit Post Office Order or Draft to us, and we will forward POSTAGE FREE.

## PRICES:

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|---|---|
| GOLD FOIL, | per oz., $30; ½ oz., $15; ⅛ oz., $4. |
| TIN FOIL, | per book, 40 cents. |
| NO. 1 AMALGAM, | per oz., $2; ½ oz., $1. |
| NO. 2 AMALGAM, | per oz., $4; ½ oz., $2. |

JAMES H. ASHMEAD & SON,
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Take pleasure in acknowledging to the Dental Profession, through this medium, their thanks for the liberal patronage and encouragement accorded them in the past at their hands.

Appreciating the growing needs of the Profession in its rapidly progressive steps, and with a desire to **merit** your continued favor, the Company have, at great expense, added to their facilities for producing **first-class work.** Having employed the most skilled labor, purchased the most approved and modern machinery, and adopted the best methods for the prompt and perfect execution of the work pertaining to the manufacture of **artificial teeth,** we can confidently promise you even better satisfaction in the execution of future orders.

We are constantly adding many new moulds of choicest pattern to our already large and varied assortment. In the selection of enamel, shading and general style and character of tooth, careful reference is had to the

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Which determine or should aid the practitioner in the selection of his case.

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This Amalgam has received the indorsement of the Profession at large for nearly forty years, which would seem to render any remarks as to its excellence superfluous. Retail price,

## THREE DOLLARS PER OUNCE.

Purchase only of reliable dealers, their agents, or *only* manufacturer,


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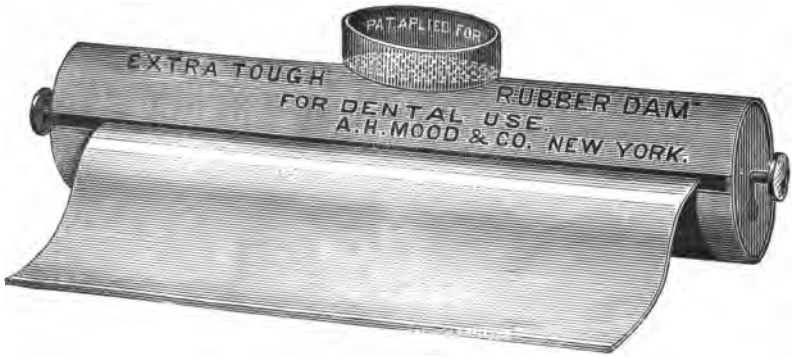


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**(Patent applied for.)**

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## A USEFUL ARTICLE IN EVERY DENTIST'S OFFICE.

It is made in Nickel and Japan ware, and can be fastened on back of chair, or elsewhere in the office. We have also had manufactured an EXTRA TOUGH RUBBER DAM, 8 inches wide and 4 yards long, and 6 inches wide and 5½ yards long (making one yard of ordinary dam), which is rolled on wooden rollers. These are held in the case by means of small pins on each end. One case will last a lifetime, as rollers can be replaced by new ones at any time.

Samples of Rubber Dam will be sent on application. Hoping to receive your order, we are

Yours truly,

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*Indorsed by leading Dentists in New York and Brooklyn.*

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|---|---|---|---|
| THIN | 6 inches wide, 5½ yards long | per Roll, | $1 00 |
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| THICK | 6 inches wide, 5½ yards long | " | 2 00 |
| THICK | 6 inches wide, 4 yards long | " | 2 00 |
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Contains directory of nearly one hundred National State and Local Dental Societies in the United States, number of members, place and time of meeting, etc.; number of Dentists, Dealers, Manufacturers, etc., in each State and Territory. Dental inventions of the past year. List of States having Dental Laws, date of passage, and other information regarding them. Number of Dental Colleges, when organized, graduates, etc. Dental Necrology, complete list for past four years, and other interesting statistical matters, with original articles and correspondence from some of the best dental writers of the day, such as Drs. Taft, Barrett, Stockwell, Bonwill, Ingersoll, Thompson, etc.

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OFFICE,
**First Floor of Factory Building.**

Mr. George E. Hodge will have the care and management of the affairs of the Company; and Mr. August Weber has charge of the factory as heretofore.

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